# NATURE AND TECHNIQUE
# OF
# ECONOMIC ANALYSIS

"The time has come to speak of fundamental things . .. .. .. The methodological problem is, in great measure, the real 'problem''.

*( J. Ackermann )*

*Studies in Modern Economic Analysis, Vol. II*

# NATURE AND TECHNIQUE OF ECONOMIC ANALYSIS

( An Essay on the Scope and Methodology of Economics )

*By*

M. L. Seth, M. A.,

ASSOCIATE PROFESSOR OF ECONOMICS,
AGRA COLLEGE, AGRA.
FORMERLY ASSOCIATE LECTURER IN ECONOMICS,
PUNJAB UNIVERSITY, HOSHIARPUR.

*WITH A FOREWORD*

*By*

Dr. Baljit Singh, Ph. D., D. Litt.,
*Professor and Head of the Department of Economics,*
*Lucknow University, Lucknow.*

*ars longa, vita brevis*

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To

Lt.-Col. K. P. Bhatnagar,

*(Vice-Chancellor, Agra University)*

*in*

Reverence and Gratitude

# FOREWORD

We, in India, have produced a fair amount of literature in economics particularly in recent years. Mostly this deals with the pressing problems of our economy in a descriptive manner and the analytical approach whenever adopted is largely empirical. There is very little that is devoted to pure science or fundamental research. But in the field of methodology there is a curious shortage of competent works by economists all over the world though it is true that of late there has been a considerable interest in the field Hence I very much welcome this exploratory essay by Dr Seth that attempts at presenting the main issues in methodology of economics and would help in promoting interest in their study.

Economics is not new in the sense of having been born only yesterday. Adam Smith's *Wealth of Nations* was published more than 175 years back. It was, of course, by no means the first work on the subject even in Europe. In our own country the first systematic work on Political Economy was written much earlier by Kautilya Judged, however, by the test of its capacity to predict, forecast future events or yield accurate policy recommendations to arrive at given goals it is still in infancy and seems to have made little progress during the course of its development.

Why is this so ? Very often an explanation is sought in a fundamental limitation that inheres in the nature of our subject-matter. This is hardly satisfactory. For one thing it has not yet been proved and secondly even if there be a limitation of the type it should be the starting point of a science rather than its end. Increasingly it is now being recognised that our failures may be due to our failings rather than due to the nature of our subject-matter. And why we have failed may to a large extent be due to the fact that we seldom paused to examine our tools, to improve and forge new ones when those in hand were blunt or did not work. There is a suspicion that we have either been working with others' tools or tools that are primitive or crude. Very correctly has Sydney Schoeffler pointed out in his excellent critical study of the Failures of Economics that, "Economists have seldom attempted, with a view to the special nature of their field of investigation, to devise their own tools of thought. They have taken their deductive techniques from physics, their statistics from genetics and agronomy, their systems of classifications from taxonomy and chemistry, their model-construction-techniques from astro-

nomy and mechanics, and their methods of analysis of the consequences of actions from engineering".

There is much truth in this and while borrowing may not be bad, copying or playing an ape is certainly not creative. Besides, we are still found working with the same tools that were handed over by masters more than a century back. Leontief rightly laments that, "If the great 19th century physicist James Clark Maxwell were to attend a current meeting of the American Physical Society, he might have serious difficulty in keeping track of what was going on. In the field of economics, on the other hand, his contemporary John Stuart Mill would easily pick up the thread of the most advanced arguments among his 20th century successors." But this has made the difference between advance towards a nuclear age and space travel on the one hand and continued condemnation of half to two-thirds of the world population to a life of misery, poverty and under-nutrition through the Malthusian dogma on the other.

Inadequacy of concepts and inappropriateness of methods have certainly prevented a deeper probe of our subject-matter. Scratching on the surface, false hopes have been raised and incorrect policies pursued that have impeded rather than promoted economic growth. This is of serious consequence to the under-developed countries which are adopting planned and phased programmes of economic development. Hence a special burden lies on us living in countries that are preparing for a 'take off' to industrialisation and prosperity to perfect our tools, concepts and methods so that more accurate laws may be discovered for correct policy formulation. I, therefore, commend this work to all who are interested in economics as a science or in its application for promoting economic welfare.

Department of Economics,
Lucknow University, Lucknow,
12th February, 1958.

*BALJIT SINGH*

# PREFACE

The present work is the second in the series entitled *Studies in Modern Economic Analysis*. The first volume *Keynesian Economics*, the author is glad to record, has had a wide and a generous response and even a measure of appreciation from the teachers and students of Economics alike. Encouraged at this, the author now takes the opportunity of presenting the second volume to his appreciative readers. The present volume, like the first, is primarily addressed to the post-graduate students of Indian Universities, although it can prove equally useful to the informed layman interested in the study of Economics.

The scope and methodology of Economics is perhaps the most controversial branch of Economic Analysis. And this controversy is as old as Economics itself. Besides being highly controversial, this field of Economics has also gathered around itself a certain amount of mist which intercepts a penetrating analysis of the main issues involved in its domain. Further, there is hardly any other branch of Economic Analysis which presents a greater confusion to the readers than the scope and methodology of Economics. The object of the present work is to clear up the mist surrounding the subject of scope and methodology and to present the principal issues to the readers in a simple, clear and forthright manner.

Regarding the definition of Economics, it is generally well-known that *there are three main definitions at present in the* field—the 'wealth', the 'welfare' and the 'scarcity' definitions. But it is not so well-known that there also exists a school of thought among present-day economists which is strongly opposed, nay, even hostile to the idea of defining the subject-matter of Economics. The author is referring here to the views of Kenneth Boulding, Gunnar Myrdal, Von Mises, Maurice Dobb and William Kapp who stand for the immediate abolition

of the frontiers separating the various social disciplines. Although the author does not fully subscribe to the views of the No-definitionists, yet he cannot look upon with favour the various barriers which separate the social sciences to-day.

The author has endeavoured within a limited space to explain and make intelligible to the readers the three principal methods *viz. statics, comparative statics, dynamics* which are frequently used in the forging of theoretical tools in Economic Science. An attempt has also been made to dilate upon the present-day alternative approaches to Economic Analysis *viz. micro vs. macro* and *partial vs. total.* Recognising the importance of *equilibrium analysis,* the author has subjected it to a detailed treatment, removing at the same time some popular misunderstandings generally associated with it. The author has accorded due recognition to *welfare analysis* which because of its growing popularity and appeal, has come to occupy a respectable position in the general body of Economic Analysis.

As regards the actual contents, Chapter I provides a somewhat exhaustive treatment of the various definitions of Economics, bringing out prominently their shortcomings and defects. It also spotlights the views of the No-definitionists. Chapter II deals with the scope of Economics and duly emphasizes the *empirical* or *applied* character of Economics particularly in the under-developed countries of Asia and Africa. It also emphasizes the great utility of Economics as an instrument in policy formulations. Chapter III deals with the relationship of Economics to other sciences and puts in a plea for what may be called *free trade* between the various social disciplines. Chapter IV examines the nature of economic generalisations in details and arrives at the conclusion that economic laws are neither wholly *absolute* nor wholly *relative* in application. They might well be considered as being of two types : (i) Abstract (ii) Concrete—the former being of universal validity ; the latter being relative to time and place. Chapter V deals with the seemingly alternative approaches to Economic Analysis *viz. micro vs. macro ; partial vs. total* and concludes with the thesis, if it may be

called so, that the so-called alternative approaches are at bottom complementary to each other. Best results would be achieved if we make a judicious combination of the two approaches for the purpose of dealing with the problems of Economic Analysis. This chapter also subjects the concept of equilibrium to a detailed treatment and challenges the Robbinsian assertion that an equilibrium always stands for justice and fairplay and that it is always the negation of exploitation and oppression. The chapter also devotes a section to *welfare analysis* and concludes that "active government intervention is indispensable for the purpose of promoting economic welfare." Chapter VI deals with the traditional methodology of Economics *viz. Induction vs.Deduction.* It is, of course, universally agreed that the two methods should be blended together to secure best results. But an important question is : what should be the proportion of the blend ? As it is, it is exceedingly difficult to answer a question like this. What we can do is to demarcate as clearly as possible the respective fields of induction and deduction for the benefit and guidance of the individual investigator. Chapter VII which is only a continuation of the preceding chapter also examines the two old methods of Economic Analysis *viz. Statics vs. Dynamics.* It deals at length with the concept of *Stationary State* which is the logical complement of the method of Economic Statics. It also studies Comparative Statics which might be considered a *via media* between Statics and Dynamics. The method of Economic Dynamics also comes in for a very detailed treatment. This chapter also demarcates the respective fields of Statics and Dynamics in Economic Analysis. The last two chapters deal *in extenso* with the various Economic Systems operative in the world to-day. An economic investigator, in the opinion of the author, must be conversant with the various economic frameworks within which he may be called upon to carry out his researches and investigations. It is on this ground that the author has deemed it necessary and expedient to examine the various alternative systems from a close range.

The book, it is hoped, shall prove serviceable to the students

preparing for the post-graduate and other public examinations in theoretical Economics. To assist them further, typical questions on scope and methodology selected from the papers set at the various university post-graduate examinations have been put together at the end. These questions have been more or less covered in the text. The students are recommended to attempt these questions independently after having gone through the body of the text. A somewhat comprehensive Index has been appended at the end for the purpose of facilitating easy and quick reference to the principal issues discussed in the book.

In the preparation of this treatise the author has inevitably drawn fairly heavily upon the writings and teachings of a large number of eminent economists, past and present. The footnotes indicate, though somewhat inadequately, the author's indebtedness to the authorities on the subject. The author acknowledges with sincere gratitude his indebtedness to Dr. Baljit Singh, Ph. D , D. Litt., Professor and Head of the Department of Economics, Lucknow University, Lucknow for evincing a keen interest in the present study and also contributing a precious and a thought-provoking foreword to it. The author records his deep debt of gratitude to Dr. Raghu Raj Singh, M. A , Ph. D , Professor and Head of the Department of Economics, Agra College, Agra without whose able guidance and unflagging encouragement the present volume would not have seen the light of the day. The author also expresses his heart-felt thanks to the publishers, Messrs Lakshmi Narain Agarwal, for their unfailing courtesy and sincere co-operation in the production of this book.

"The author", said Gibbon in his *Memoirs*, "is the best judge of his performance". As such, no one can be more conscious of the failings and weaknesses of the present volume than the author himself. Every effort shall be made to rectify them in the next edition. Meanwhile suggestions for the improvement of the book shall be gratefully accepted from the readers.

Agra,
March, 1958.

M. L. S.

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# CHAPTER I

## DEFINITION OF ECONOMICS

"Economics ... .. .. ...has suffered more than any other discipline from the malaise of polemics about definition and method". ( Edwin R. A. Seligman : *Encyclopaedia of Social Sciences*, Volume V, p. 344).

"Political Economy is said to have strangled itself with definitions". ( J. N. Keynes : *Scope and Method of Political Economy*, p. 153).

### 1. FROM POLITICAL ECONOMY TO ECONOMICS

Nearly one hundred and eighty-one years ago, the science of Economics was born with the publication in 1776 of Adam Smith's *magnum opus*, "*An Enquiry into the Nature and Causes of Wealth of Nations.*" It will thus be realised that Economics is not a very old science. It is certainly much younger than several of the other social sciences. At its birth, it was baptised as *Political Economy*—an appellation which remained in use for nearly a century after its birth. No doubt, sporadic attempts were made in the early part of the 19th century to bestow new names upon it. Whately suggested *Catallactics* or the science of exchanges ; Hearn called it

*Plutology* or the science of wealth and Ingram insisted on naming it as *Chrematistics* or the science of money-making. Despite these attempts, the original appellation of *Political Economy* continued to survive the early and the middle part of 19th century. Towards the close of the century, however, there was a definite change from *Political Economy* to *Economics*. In Germany, it came to be known as *Social Economics.* Some of the pioneers to whome this change can be directly attributed include Mayo Smith, E. B. Andrews, Pantaleoni, and Dietzel. But the greatest credit is due to the late Dr. Alfred Marshall who in 1890 christened his monumental work on Economic Theory as the "*Principles of Economics.*"

Why this change from *Political Economy* to *Economics*? What causes accounted for this change? *Firstly*, it was realised that the designation *Political Economy* was too narrow and restricted a designation to adequately express the subject-matter of the science. The term "Economy" in those days, as even now, had become a byword for saving money. But merely saving money could not be considered the whole of Economic Science.[1] The scope of the science was certainly much wider than mere "money-saving." *Secondly*, the use of the word "Political" appeared somewhat offensive when the votaries of the new science dealt with economic relationships and economic changes

1. John A. Todd: *The Science of Prices*, 1930 (Oxford University Press) p. 12.

in society without any reference to political factors. The use of political methods in the science was completely ruled out. Hence the term *Political Economy* was a misnomer which required an immediate rectification. *Thirdly*, economic theory had developed sufficiently or at least it had emerged from the 'infant' stage towards the close of the 19th century. Hitherto, economic theory and economic practice had been mixed up under the appellation of *Political Economy*. But, with the development of economic theory, a clear-cut separation between economic theory and practice had become inevitable. And when this segregation between the two was enforced in the closing years of the 19th century, the use of the term *Political Economy* appeared neither appropriate nor desirable. Hence it was given up. As already said, Marshall did a great deal to popularise the use of the new term *Economics* in his writings. Subsequent economists accepted and adopted the new term without demur and now *Economics* has grown too popular a term to yield place to some new term, although attempts[2] have been made in recent years to name theoretical *Economics* as *Economic Analysis.* The latest term is not in any way an inappropriate or inapt term so far as theoretical *Economics* is concerned.

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2. See J. A. Schumpeter : *History of Economic Analysis*, 1954 ( Published by George Allen and Unwin Ltd., London. ) and Kenneth E. Boulding's recent work : *Economic Analysis*, 1954 (Published by Hamish Hamilton, London).

## 2. THE PROBLEM OF DEFINITION

As Professor Erich Roll[3] has said, "Definition is not the idle pursuit of the pedant; it is an essential part of any systematic discipline that the limits of the field which it sets out to cultivate should be clearly marked." In other words, every intellectual discipline should lay bare in advance the subject or the subjects which the tyro is expected to study in that particular branch of knowledge. Realising this, the economists, from the very beginning, had tried to define the subject-matter of Economics. But, with the passage of time, the definitions of Economics have also been undergoing changes. This is, perhaps, not an unnatural phenomenon. As Professor Zuethen[4] has observed, "Economics is an unfinished science." It is still in the process of growth and development. As time elapses, there might be new developments in the field of theory and new subjects included in Economics. The definition of to-day is, therefore, very likely to become obsolete or out-of-date by tomorrow. Professor Lionel Robbins puts it aptly when he says, "Like the wall of a city, it (*i. e.* definition) has usually been erected, not to be a receptacle for such edifices as

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3. See his *Elements of Economic Theory*, 1950 (Oxford University Press) p. 2.

4. F. Zuethen: *Economic Theory and Method*, 1955 (Longmans Green and Co.) p. 3. This work has been translated from the original which was entitled OKONOMISK TEORI OG MEODE, 1942.

might afterwards spring up, but to circumscribe an aggregate already in existence."[5] As such, a science can receive a satisfactory formal definition only after a considerable period of development and growth. A satisfactory formal definition, as it is said, follows and does not precede the creation of a science.

At present, there is a plethora of definitions of Economics available in the field. Perhaps none of them is free from defects or drawbacks. Even then an examination of them shall be well worth the trouble undertaken since that in itself is an educative process in so far as it brings out clearly before us the fundamental tenets of Economic Science. Broadly speaking, the various definitions of Economics can be lumped together under three heads: (i) 'Wealth' (ii) 'Welfare' (iii) 'Scarcity' It shall be our task to analyse and examine the implications of these definitions in the ensuing sections.

## 3. 'WEALTH' DEFINITION

The early economists defined Economics as the *Science of Wealth*. Adam Smith, the father of Modern Economic Theory, christened, as already said, his *magnum opus* as *An Enquiry into the Nature and Causes of the Wealth of Nations.* Economics was regarded as the science which studied the production and consumption of wealth.

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5. Lionel Robbins : *An Essay on the Nature and Significance of Economic Science,* 1932 (The Macmillan & Co., New York).

If the term 'wealth' is interpreted in a broad sense to mean scarce goods and services used to satisfy wants, then, perhaps there could not be much opposition against this definition. But, unfortunately, the term 'wealth' was interpreted in a very narrow sense to mean riches or abundance of money, and the economist as such was expected to suggest ways and means of increasing the wealth of society. Interpreted in its narrow sense, the definition rightly became the subject of scathing criticism at the hands of some literary figures of the 19th century like Ruskin, Carlyle and Mathew Arnold. Economics was dubbed as the "bread-and-butter science", as the "gospel of Mammon" or a science that taught selfishness and love of money ; a dark and a dismal science. Perhaps the use of these condemnatory epithets in relation to Economics was not unjustified in those days when religious sentiments were supreme and spiritualism held sway over mens' minds. Anyone who talked of wealth and materialism was branded a heretic. In such a context, a science which spoke of wealth and ways of increasing or amassing it could not escape public censure or vilification. For quite a long time, the science of Economics remained under a cloud for its so-called association with the meaner and baser things of life.

Besides, the acceptance of Economics as the science of wealth also tended to restrict or narrow down the scope of the subject unnecessarily. If Economics is defined as the Science of Wealth, then

a necessary corollary follows that Economics studies the activities of those men and women who are engaged in the production and consumption of wealth. Men and women who were not engaged in the production of material things did not and could not fall within the purview of Economics as such. For example, an old man leading a retired life could not fall within the orbit of an economist's study because he was not engaged actively in the task of wealth-production. But can we leave out such a person from the orbit of our study? Undoubtedly such a person is not engaged in wealth-production; nevertheless, he is subject to some of the most important laws of Economics like the law of substitution. His economic resources are limited in relation to his wants and he has to adjust them in relation to the unlimited wants to secure maximum satisfaction. He shall have to substitute the more valuable things for the less valuable ones to secure the highest utility or satisfaction. Is he not, then, working under the law of substitution? Can we, as economists, afford to exclude him from our purview? Certainly not. But the 'wealth' definition by excluding such persons unnecessarily limited the scope of the science.

The 'wealth' definition, on these grounds, was considered unsatisfactory and as such discarded towards the close of the 19th century.

### 4. 'WELFARE' DEFINITION

Marshall was the first economist who lifted the science of Economics from the morass into which

it had fallen towards the close of the 19th century. He shifted the emphasis from 'Wealth' to 'Welfare'. Wealth, according to him, was not the end but only a means to an end, the end being human welfare. Wealth is needed not for its own sake, but for the sake of promoting human welfare. Wealth is thus only a secondary thing, the primary thing being welfare. As Marshall puts it, Economics is "on the one side a study of wealth; and on the other, and more important side, a part of the study of Man".[6] In fact, he had "a practical desire to make economic theory an engine of social betterment".[7] And he formulated his definition of Economics strictly in accordance with his ideas of human welfare. His definition runs as follows:

"Political Economy, or Economics, is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being."[8]

Certain implications follow from this definition, which need to be examined carefully. *Firstly*, it is a study of human beings, not of beasts or animals or plants. *Secondly*, it studies the economic aspect of the life of human beings. An individual has seve-

6. Alfred Marshall: *Principles of Economics* (Eighth Edition) p. 1.

7. *Encyclopaedia of Social Sciences*, Volume V, p. 368.

8. Alfred Marshall: *Principles of Economics* (Eighth Edition) p. 1.

ral aspects of his life *viz.* social, religious, political and economic. Economics, it is evident, has no concern with the social, religious and political aspects of human life. There are other well-developed social sciences which study these different aspects. Economics is concerned purely with the economic aspect of human life. What does the economic aspect of an individual's life consist of? Obviously it relates to how he earns his income and how he spends it. *Thirdly*, it studies human welfare—not the whole of human welfare but only a part of it, namely, *economic* or *material welfare.* This is implicit in the phrase, "material requisites of well-being" which is incorporated in Marshall's definition. Economics is concerned with that part of individual and social action which is connected with the attainment of material welfare. The emphasis is all on *material welfare.* Hence the definition is dubbed as 'welfare definition'.

Besides Marshall, there are other prominent economists too who have attempted to define Economics in welfare terms. According to Edwin Cannan, "The aim of Political Economy is the explanation of the general causes on which the material welfare of human beings depends"[9]

Here again the emphasis is on *material welfare,* not on non-material welfare, the latter being out of the purview of Economics.

Professor A. C. Pigou remarks, "The range of

9. Edwin Cannan : *Wealth,* p. 17.

our inquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money"[10]

The part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money is, of course, economic welfare. It is this economic welfare which, according to Pigou, forms the subject-matter of the science of Economics.

Why do Marshall, Cannan and Pigou concern themselves with material or economic welfare? The reason is that human welfare in all its aspects is an immeasurable quantity. But, as Pigou points out, the economists have with them an instrument in the form of money with which the material part of human welfare can be measured with some degree of accuracy and exactness. It is on account of this money-instrument that economists study the causes of material or economic welfare to the exclusion of other types of social welfare.

The 'welfare' definition, although it carries the weight of authority of such outstanding economists as Marshall and Pigou, is yet not free from criticism. The 'welfare' definition has in recent years been objected to on several grounds:—

(i) Professor Lionel Robbins has objected to the 'welfare' definition on the ground that it

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10. A. C. Pigou: *Economics of Welfare* (Fourth Edition), 1948, p. 11.

includes within its purview only material things. It ignores or excludes the consideration of non-material things from its orbit. As such, it is a highly unsatisfactory definition. In actual life, the borderland between the material and the non-material things is not so clear-cut as is assumed by the advocates of this definition. The two are so inextricably mixed up with each other that it is difficult, if not impossible, to segregate them. There are several things in our daily life which satisfy our urgent wants and are also scarce in supply. But these things are not material in any sense of the term. As Robbins observes, "The services of the opera-dancer are wealth. Economics deals with the pricing of these services, equally with the pricing of the services of a cook." But these services are not 'material' in any sense. Still they form the subject-matter of Economics. Then there are the services of the doctors, lawyers teachers *etc.* which are highly conducive to human welfare, and yet they have nothing *material*[11] in them, although they are scarce and have value in them. As Robbins points out, "A theory of wages which ignored all those sums which were paid for 'immaterial' services or spent on 'immaterial' ends would be intolerable." Robbins has pointed out another hole in the argument of the 'welfare'

11. "This fatal word 'material' is probably more responsible for the ignorant slanders on the dismal science than any other economic description" (Alec L. Macfie : *An Essay on Economy and Value*, 1936, (Macmillan & Co.) p. 5.

economists. Although they regard Economics as being concerned with the causes of material welfare yet it is curious how they have almost unanimously adopted a *non-material* definition of productivity. These economists have rejected Adam Smith's distinction between productive and unproductive labour as not being realistic and have proceeded to formulate a new distinction between the two types of labour. According to this distinction, the labour of certain members of the community like teachers, lawyers, doctors and even opera-singers is considered productive and as such a part and parcel of the science of Economics. It is obvious these services are non-material in character and yet they are considered as being part and parcel of Economics. Does it not, therefore, amount to a paradox? While defining Economics, they rigidly rule out the consideration of non-material objects but when it comes to consideration of the actual subject-matter, they include them (*i. e.* non-material things) as being part and parcel of Economics.

(ii) Professor Lionel Robbins objects not merely to the use of the word 'material' in the 'welfare' definition. He has also criticised the connection that is sought to be established by the welfare economists between Economics and 'welfare'. Robbins would have nothing to do with welfare at all. According to him, the science of Economics studies several activities which are hardly conducive to welfare. The activities of the manufacturers of intoxicants such as alcoholic

drinks and opium *etc.* are certainly economic activities. The welfare economists dare not deny the economic character of such activities. But are such activities conducive to human welfare? Yet they are studied by the economists because they satisfy human wants and are concerned with the production and distribution of scarce goods. How do the welfare economists explain this anomalous position? Some economists are so deeply attached to the 'welfare' idea that they do not simply realise the illogicalness of their position. Prof. Cannan, for example, speaks of the "Political Economy of War" as a sheer "contradiction in terms". The argument seems to be that since war is not conducive to material welfare and Economics is solely concerned with material welfare, therefore, war cannot be a subject-matter of the science of Economics. The argument may appear perfect at first sight. But if the 'welfare' basis of Economics is questioned, then "Political Economy of War" no longer appears as a contradiction in terms. The fact of the matter is that "Political Economy of War" is the latest addition to the theoretical apparatus of Economics and tells us a lot of things as to how a modern war can be successfully prosecuted financially.

It would thus appear that the 'stand' taken by the 'welfare' economists in regard to the 'welfare' basis of Economics is self-contradictory and shaky in the extreme. In sheer disgust, Robbins asks them. "Why talk of welfare at all? Why not throw away the mask altogether?" He further

remarks emphatically "Whatever Economics is concerned with, it is not concerned with the causes of material welfare".

(iii) The 'welfare' definition is also objected to on the ground that welfare cannot be quantitatively measured. Prof. Pigou, no doubt, regards money as an instrument for the measurement of welfare. "The one obvious instrument of measurement available in social life is money" says Pigou. But the question can be raised : Is money a satisfactory measure of welfare ? There can be no two opinions on the point that money may be a rough, but certainly not a satisfactory measure of welfare. Does it imply that two persons paying the same price for a commodity derive an equal amount of utility or 'welfare' from its purchase ? It is possible that one person may be very rich while the other very poor. Obviously, the utilities or satisfactions which the two persons derive from their purchases cannot be equal. The utility derived by the poor person shall be much greater than that derived by the rich person. How can, then, we hold that money represents an equal utility or welfare for all persons ? It is in this sense that money represents, at best, only a rough and ready measure of weltare. Prof. Pigou, himself, seems to believe in the imperfect measurability of welfare when he remarks: "It is not, indeed, possible to separate it (*i. e.* economic welfare) in any rigid way from other parts."[12] If money

12. *Ibid.*, p. 11.

were a perfect measure of welfare, then, it would not be impossible to separate it from other types of welfare. It is on account of the difficulty of separating economic welfare from other types of welfare that Pigou regards the outline of the territory of Economics as necessarily vague. Prof. Cannan is still more explicit when he remarks," "the province of economics cannot be marked out by a row of posts or a fence, like a political territory or a landed property."[13]

An additional implication of the acceptance of the 'welfare' definition would be that Economics would cease to study the problems of a *barter* economy where money is conspicuous by its absence. Since money is missing in such an economy, it would be difficult, rather impossible, to segregate economic welfare from other types of welfare. Economics, then, which studies only economic welfare, according to the 'welfare' economists, would break down in such an economy. Now the *barter*-economy, as we know, is not the figment of some economists' imagination but is an historical fact. Does it imply, then, that Economics had no application in such an economy? Some of the fundamental problems of Economics, with which we are faced today, must have confronted the men and women in the *barter* economy as well. For example, the problem of the scarcity of means in relation to ends. The people of the *barter* economy were as much subject to the doctrine of maximum satisfac-

13. Cannan : *Wealth*, pp. 17-18.

tion as we are to-day. Does not, therefore, the acceptance of 'welfare' definition unnecessarily restrict or narrow down the scope of the science ?

(iv) The 'welfare' definition is also sometimes objected to on the ground that it makes Economics a purely social science. In other words, Economics would then study man as a social being—as a part and parcel of society. Economics would have nothing to do with the problems of those individuals who were cut off or isolated from the rest of the society. A Robinson Crusoe or an Himalayan Saint would clearly fall out of the orbit of Economic Science, because both of them have ceased to be members of the community. Such an idea is implicit in the 'welfare' definitions given both by Marshall as well as Pigou. But can we accept such a position ? A Robinson Crusoe or an Himalayan Saint is as much subject to some of the fundamental laws of Economics as a regular member of a community. The law of substitution is a fundamental law to which everyone is subject whether he is a member of a community or not. Even a Robinson Crusoe has to allocate his scarce time among its various uses, and as such he too, like the member of a community, becomes subject to the operation of the law of substitution. If that is so, then, how can Robinson Crusoe be excluded from the purview of Economics. It is, therefore, suggested that Economics should be treated more of a human than of a purely social science. If Economics is accepted as a human science, then it shall

embrace a much wider field of study. As a human science, it shall study all human beings whether they are members of society or not. A Robinson Crusoe or an Himalayan Saint would be as much within the scope of Economics as a member of the community.

(v) Still another objection to the 'welfare' definition raised by Professor Lionel Robbins is that its acceptance by the economists would surely lead them to tresspass into the territory of Ethics. If Economics is a 'welfare' science, then the economists would certainly study ways and means as to how the welfare of the community can be maximised—what things contribute and what things do not contribute to the promotion of economic welfare. Such a consideration would naturally raise the question of "Value Judgments"; the economists may have to pass moral judgment as to what is good and what is bad, thereby landing themselves unconsciously into the foreign territory of Ethics. Professor Robbins very strongly holds the belief that Economics is neutral between ends and that the economists should not pass value judgments. Whether the economists should be concerned with value judgments and whether Ethics is to be treated as foreign territory are highly controversial matters. We shall have more to say about them in the next chapter. Here it suffices to say that the implicit 'normative' character of the 'welfare' definition has not been relished by Positivists like Professor Robbins and his followers.

(vi) Lastly, Professor Lionel Robbins criticises the 'welfare' definition on the ground that it is *classificatory* rather than *analytical* in character. According to the 'welfare' definition, Economics concerns itself with a certain *group* of activities rather than with a certain aspect of every activity. Economics deals only with the production and consumption of wealth. To Professor Robbins, the division of human activities into 'economic' and 'non-economic' is completely unscientific and illogical. Even an economic activity may have a non-economic aspect. Does it mean, then, that Economics should consider the whole of that activity? Does it mean that an economist should appropriate to himself the whole of an economic activity when only a part of it belongs to him by right? Professor Robbins makes it clear that Economics focuses its attention only on a particular *aspect* of activities *i. e.* activities which are undertaken under the influence of scarcity.

On account of these objections, Professor Robbins rejects the 'welfare' definition and proceeds to construct a new definition which, he claims, is singularly free from all these defects. Since his definition lays so much stress on the 'scarcity' of means in relation to ends, it is generally referred to in economic literature as the 'scarcity' definition.

## 4. 'SCARCITY' DEFINITION

The publication of Professor Lionel Robbins'

*Nature and Significance of Economic Science* in 1931 initiated an altogether fresh controversy regarding the definition of Economics. Uptil then, Marshall seemed to have settled the question of definition once for all and almost all the subsequent economists seemed to have accepted Marshall's definition without demur. Robbins' book, however, shook some economists' faith in the old, traditional definition of Economics. Some of them immediately deserted the old camp to gain entrance into the new. Some others were on the horns of a dilemma while the remaining ones were definitely opposed to the new conception of Economics. The passage of time brought an increasing number of followers in Robbins' Camp. Robbins' definition had become a matter of raging controversy among economists. Despite its highly controversial character, it must be said that Robbins' definition was not altogether a new or an entirely original conception. Some years before the publication of Robbins' *Nature and Significance of Economic Science* in 1931, Philip H. wicksteed (1844-1927) a British economist, had laid down in his *magnum opus*. "*The Commonsense of Political Economy*" almost all the basic elements of Robbins' subsequent definition of Economics. Just examine the definition that Wicksteed gave of Economics :

"Economics, then, may be taken to include the study of the general principles of administration of resources, whether of an individual, a household, a business or a State ; including the examination of

the ways in which waste arises in all such administration."[14]

At another place, Wicksteed makes the scope of Economics still more clear when he says :

"Economics...........a study of the principles of administration of resources and selection between alternatives."[15]

The question of administration of resources would not arise if they were not scarce. Nor would it be necessary to select between alternatives if they were not unlimited. Do we not, then, have the main ingredients of Robbins' definition implicit or even explicit in Wicksteed ? He further illustrates his thesis thus :

"An ardent lover may decline a business interview in order to keep an appointment with his lady love. A man of leisure with a taste for gardening will have to apportion time, money and attention between them and consciously or unconsciously will balance against each other the differential significances involved."[16]

It is abundantly clear that Robbins, in framing his definition of Economics, had been much influenced by Wicksteed. Let us now examine

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14. Philip H. Wicksteed : *The Commonsense of Political Economy* ( George Routledge and Sons Ltd., London ) Vol. I, p. 16.

15. Ibid., p. 17.

16. *Ibid.*, Vol. II, p. 780.

Professor Robbins' definition and its various implications.

According to Robbins, "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses."

If we analyse this definition we shall find that it lays down three basic propositions which might be said to comprise the main structure of Economic Science. The three fundamental propositions involved in the definition are *ends*, *scarce means* and their *alternative applications*.

1. *Ends.* Ends here refer to human wants. As we know from our experience, our wants are unlimited in number. The satisfaction of one want immediately gives rise to another. In view of the multiplicity of wants, that stage perhaps never reaches when all the wants of a person are fully satisfied except after death. So long as we are alive, our wants can never be satisfied in their totality, because they are so many in number that it is next to impossible to satisfy them all. If our wants had been limited in number, we could have easily satisfied all of them. Since they are unlimited, we have to choose between more urgent and less urgent wants.

2. *Scarce Means.* The wants may be unlimited, but the means which are available to satisfy these wants are strictly limited. No doubt, there are certain free commodities available to satisfy our

wants. For instance, water and air are available in abundance and we can consume as much of them as we desire. There is no scarcity of their supply in relation to demand. Unfortunately the number of such goods is not very large. Most of the commodities that we require to satisfy our wants are strictly limited in supply. Had all these goods been available in abundance, we could have satisfied all of our wants and no economic problem would have arisen. The economic problem arises because most of the goods are scarce in relation to their demand.

The word 'scarcity' is to be interpreted here in a relative, not an absolute sense. The mere existence of short supply does not make a commodity scarce, if there is no demand for it. As Professor Robbins points out, the bad eggs, though much smaller in number than good ones, are not scarce in the economic sense, since there is no demand whatsoever for bad eggs. The bad eggs, then, are not at all scarce in relation to their demand. On the other hand, foodgrains of the order of hundreds of millions of tons may be available in the world markets and yet foodgrains may be 'scarce', because their demand is much greater than the supply. The scarcity or otherwise of a commodity is to be considered only in relation to its demand.

3. *Alternative Applications of Scarce Means.* The third ingredient of Robbins' definition is that the scarce means at our disposal should be capable of being put to alternative uses. If a

commodity can be put to one single use alone and to none else, no economic problem would arise in its use. After the commodity had been put to that use, the remainder of it shall become a free good with little economic significance. In actual life, however, we find that a commodity can be put to several alternative uses. Its aggregate demand becomes so large that its existing supply is insufficient to meet it and the commodity concerned acquires an economic significance.

It is implicit that the alternative uses to which the commodity can be put should be of varying degree of importance so that it becomes possible to select the use or the uses to which the commodity is to be put. In case the various uses hold the same importance, then it would become difficult, nay, impossible to choose the use to which it is to be put.

It is evident that the economic problem would not arise unless all these conditions were fulfilled. Neither the *multiplicity* of ends nor the *scarcity* of means nor even the *alternative* applicability of the scarce means taken alone can create an economic problem. An economic problem arises only when these conditions are fulfilled *simultaneously*. Robbins, by this definition, has provided us with a reliable *test* to distinguish an economic from a non-economic problem. An examinee near the examination is faced with the problem of scarcity of time in relation to the several subjects that he has to prepare. As such, the examinee is confronted

with an economic problem. A person with a ten-rupee note in his pocket has to make a choice as to how this limited sum is to be spent on the unlimited wants which he has to satisfy. A country preparing for war has to make a choice between 'gun' and 'butter' Why does the question of choice arise in all these cases? The problem of choice arises because the means are scarce in relation to the unlimited ends.

The concept of opportunity cost (also known as *displacement cost*) which is of great importance in economic analysis is the direct outcome of the above phenomenon *viz.* scarcity of means in relation to ends. Since all the ends cannot be satisfied with the scarce means at our disposal, choice becomes inevitable. We have to pick and choose between alternatives, since all the alternative ends cannot be satisfied *in toto.* The choice of one alternative means that the other alternative is foregone. A person with a two-rupee note can either go to the cinema or witness an All-India cricket-match, because with a two-rupee note he cannot see both. If he goes to the cinema, then the *opportunity* or *displacement cost* of the cinema would be the cricket-match. The *opportunity cost* of a thing, in the last resort, is the thing which was most clearly chosen instead ; the alternative foregone.[17]

Robbins' definition might perhaps give rise to

17. Frederic Benham : *Economics*, 1948 (Published by Sir Issac Pitman and Sons, Ltd., London.) p. 6.

the impression that the choice between the various competing alternatives is always made rationally. Such an inference from Robbins' definition would not be an illegitimate one. Early Classical Economics was based on the assumption that man always acted rationally in economic matters. For a long time, the *Homo Oeconomicus* or the *Economic Man* was the basis of economic thought. The *Economic Man* was generally considered to be a person who was completely rational in satisfying his wants, a person whose conduct was governed purely by *economic* considerations. But, does such a person actually exist in society? Do we have economic men who are actuated by egocentric or hedonistic motives alone? Wicksteed boldly said that such men[18] simply did not exist in real society. He shattered this conception once and for all.[19] It is now common knowledge that real men and women in their daily conduct are not governed purely by economic considerations. In other words, the choice between competing alternatives is not always rational. Men and women do not always weigh up carefully the pros and cons of alternative ways of spending money. They are generally light-hearted and irrational in buying trivial things. Even

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18. As Cairncross has said, "The economic women may be less of an abstraction than the economic men, the tradition among economists is that the housewife is more rational in buying" (*Introduction to Economics p. 5*)

19. See Lionel Robbins' Introduction to Wicksteed's, *The Commonsense of Political Economy.*

in bigger purchases, they might act impulsively without bestowing due thought upon the various implications resulting therefrom. Some of us do not care even to ask the price before making a purchase, because we do not want to undergo the lengthy process of reasoning every time that we make a purchase. All this shows that our conduct as consumers is not always rational. Further, it must be clearly understood that we, in Economics, are to consider the choices of ordinary individuals, not, as Meyers puts it, the choices of paranoiac (mentally deranged) or the cretin (defamed idiot).[20]

Robbins' definition raises a fundamental issue, *viz.* the scarcity of means in relation to ends and the consequent problem of choice. The problem of choice is universal. As Erich Roll puts it, "It exists in the one-man community of Robinson Crusoe, in the patriarchal tribe of central Africa, in medieval and feudalist Europe, in modern Capitalist America and in Communist Russia".[21] He further observes. "The laws which shall be derived from this definition shall be applicable to all societies, The laws of choice, like the laws of gravitation, will be independent of the legal and political framework in which they work".[22] The problem of choice thus arises in every society

20. See his *Elements of Modern Economics,* Third edition, (The World Press, Ltd., Calcutta) p. 7.

21. Erich Roll : *The Elements of Economic Theory,* 1950, (Oxford University Press) p. 16.

22. *Ibid.,* p. 17

irrespective of its "legal and political framework." The problem has to be solved in dictatorships and democracies; in planned and unplanned economies. It is true that different methods may be applied to solve the problem of choice in different countries. In a capitalist economy, the problem may be and is actually solved through the free-working of the *price-mechanism*, The consumers and the producers adjust the scarce means in relation to ends through the working of the laws of supply and demand. In a communist economy, on the other hand, the task of the adjustment of scarce means to ends is handled by the State Planning Commission. It is this body which decides how and in what proportions the scarce means are to be allocated among the alternative uses. It is possible that the problem is tackled more satisfactorily by a State Planning Commission under Communism than by the freely-operating *price-mechanism* under Capitalism. Anyway this point is at present beyond the scope of our discussion. What we are trying to emphasize is the *universal character of the problem of scarcity.*

Professor Lionel Robbins has exercised such a profound influence on the present-day economists that several of them have been tempted to define Economics on *Robbinsian lines.* Some of these definitions are well worth examination.

*(i) Erich Roll's Definition*

"The economic problem is essentially a problem arising from the necessity of choice ; choice of the manner in which limited resources with alternative

uses are disposed off. It is the problem of the husbandry of resources.............Economics studies the activity of husbandry."[23]

*(ii) Macfie's Definition*

"Economics is simply our attack on the problem of scarcity".[24]

*(iii) Lerner's Definition*

"The fundamental economic problem is the problem of choice............unless there is scarcity, choice is unnecessary.................unless there are alternative uses for a factor, choice is impossible."[25]

*(iv) Scitovosky's Definition*

"Economics is a social science concerned with the administration of scarce resources".[26]

The term "administration" is used here in its broadest possible sense and it is not restricted to mean only administration by a central authority

*(v) Cairncross' Definition*

"Economics is a social science studying how people attempt to accommodate scarcity to their wants and how these attempts interact through exchange".[27]

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23. *Ibid*, p. 13.
24. Alec L. Macfie : *An Essay on Economy and Value*, 1936 (Macmillan & Co., London) p. 6.
25. A. P. Lerner : *The Economics of Control*, 1952, (Macmillan & Co.) p. 58.
26. T Scitovosky : *Welfare and Competition*, 1952, (George Allen and Unwin Ltd., London) p 3.
27. Cairncross : *Introduction to Economics*, p. 8.

Cairncross makes it clear that the economist would study the problem of choice only if it takes on a social aspect *i. e.* the economist would study an individual's choice only if it produces repercussions on other members of society. An individual may prefer to have an afternoon nap rather than to take a walk This is a choice no doubt, but this choice has no social repercussions. It produces no effects on others. Such a choice would not form the subject-matter of Economics. On the other hand, an individual's decision to spend Rs. 2 on a cinema picture rather than on a cricket match immediately produces social repercussions and as such his choice shall fall within the orbit of Economics. To make it still more clear, we may say that in Economics we study those choices which are subject to the pricing process or which are capable of being expressed in terms of money.

*(vi) Stigler's definition*

"Economics is the study of the principles governing the allocation of scarce means among competing ends when the objective of the allocation is to maximise the attainment of the ends".[28]

Stigler's definition covers the familiar Robbinsian ground except that it makes explicit what is implicit in Robbins' definition. Stigler points out that the object of allocation of scarce resources

28. George J. Stigler : *The Theory of Price,* 1949 ( Macmillan & Co. ) p. 12.

among competing ends is to maximise satisfaction or to distribute the scarce means among the multiple ends in such a manner as to maximise utility.

The term 'maximum satisfaction' has been interpreted in an unorthodox fashion by Professor J. K. Mehta of Allahabad University. Ordinarily, maximum satisfaction is attained when the largest number of wants is satisfied out of given resources. Professor Mehta considers the maximisation of satisfaction to be rather inconsistent with the maximisation of human wants. A want is a painful experience. The larger the number of wants, the greater shall be the pain experienced by an individual or lesser shall be his satisfaction. Therefore, he argues, if an individual is to maximise his satisfaction, he should minimise his wants. "The object of all rational behaviour is to obtain perfect bliss-happiness-by liberating the soul from the bondage of wants".[29] And so he defines Economics as "a science that studies human behaviour as an attempt to reach the state of wantlessness."[30] This may be considered a new (or shall we say, an Indian) conception of the ultimate objective of the science of Economics.

We have now considered the 'scarcity' definition and the implications that flow from it. This definition has demolished the old structure of Economics based upon "material welfare". In its

29. J. K. Mehta : *Studies in Advanced Economic Theory*, 1948, (Premier Publishing Co ) p. 14.

30. *Ibid.*, p. 9.

place, it has erected an altogether new structure with two foundation-stones *viz.*, the scarcity of means and the multiplicity of ends. The definition enjoys a universal application. It is true not only in Capitalist America, but also in Communist Russia. The definition is true of all places and perhaps of all times. Prof. Macfie is so much impressed with this definition that he is led to remark, "what he (Robbins) has said cannot be resaid. To me, it appears final within its chosen scope".[31] Furthermore, the 'scarcity' definition has sharply defined the scope of Economics. It has delimited the field of Economics by building a boundary-wall around it. There can now be no misconception or haziness about the sphere of Economics. Any problem, marked by scarcity of means and multiplicity of ends, becomes *ipso facto* an economic problem and as such a legitimate part of the science of Economics. Nor can we be oblivious of the fact that the 'scarcity' definition has rescued Economics from the charge of being the 'Gospel of Mammon' or the "Bread-and Butter" Science. No longer can it be dubbed as the 'dark and dismal science.' According to the 'scarcity definition' Economics is not at all concerned with ends ; they may be noble or ignoble ; good or bad. The economists would study all such situations where the ends are multiple and means scarce. But the economists

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31. Macfie : *An Essay on Economy and Value*—Preface, pp. vii—viii.

have nothing to do with the selection of ends. They clearly fall outside the purview of Economics, according to the 'scarcity' definition.

Like the 'welfare' definition, the 'scarcity' definition too is not free from criticism. Although Robbins can claim a large number of followers among the present-day economists, there are some outside this circle who are vehemently critical of him. *Firstly*, it is pointed out, that although Robbins declaims so much against the 'welfare' definition, yet the concept of welfare is implicit even in his definition. As pointed out in the preceding paragraph, the idea of a maximum satisfaction is implicit in the 'scarcity' definition. The scarce means are to be adjusted to the multiple ends in such a manner as to secure the maximum utility or welfare. The concept of welfare enters his definition through the backdoor. *Secondly*, the neutral attitude of the 'scarcity' definition towards ends is not relished by some Marshallian economists like Barbara Wootton, Beveridge, Durban and Fraser. They consider the 'scarcity' definition as too narrow and restricted in scope for a social study like Economics. They are under no circumstances prepared to divest Economics, as Robbins does, of ethical considerations. This point shall be discussed at length in the succeeding chapter. *Thirdly*, the 'scarcity' definition converts Economics into a 'pure' science, a science that is concerned with the formulation of economic generalisations having little or nothing to do with

practice. Majority of the economists today have come to believe that the economist must not only be a tool-maker, but also a tool-user. Mrs. Barbara Wootton in her *Lament for Economics* complains, "We spend too much time in forging theoretical tools and too little time in trying to make practical use of them." It is significant that Robbins himself acts as the Economic Practitioner in his "*Economic Planning and International Order*" It may be added here that the justification of any social science is its ability to contribute to the solution of practical problems, and from this point of view the 'scarcity' definition is found wanting.

## 5. VIEWS OF NO—DEFINITIONISTS

We have discussed in the preceding sections the various definitions of Economics put forward from time to time by different economists. There is also a school of thought among the present-day economists which is strongly opposed to any attempt at defining or delimiting the subject-matter of Economics. Professor Jacob Viner, on being asked to define the scope of the science of Economics, once replied, "Economics is what economists do." There is much truth in this remark, because it is clearly difficult to delimit the boundaries of a social or even a natural science. As time passes, there are new developments and new topics might be included while the old ones may have to be excluded. Any

definition which is given today can, therefore, be provisional in nature.

Professor Maurice Dobb is equally critical of the utility of any precise definition of the subject-matter of Economics. He says,[32] "The search for logically concise definitions of one's subject-matter, which is so popular today, must generally be barren, and when pushed to an extreme, must result in emptying ideas of real content and attaining little but an arid and scholastic dogmatism". Dobb further remarks, "It is only at the sacrifice of any comparable realism that precise definitions of the type which is fashionable today can be attained...............Precision may be a most desirable, even an essential ingredient of the process of thought, as is sharpness of steel in cutting. When precision is sanctified as the end of thought and made the touchstone of Truth, thought is rendered flat and sterile and ideas become husks lacking the substance of life".[33]

Dobb is thus opposed to the formulation of precise definitions merely to satisfy the students' desire for logical precision.

Professor Von Mises is even more definite in his opposition to the so-called precise definition.

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32. Maurice Dobb: *Political Economy and Capitalism*, p. 173.

33. *Ibid.*, pp. 174—175.

" It is illegitimate," he says, "to regard the 'economic' as a definite sphere of human action which can be sharply delimited from other spheres of action".[34]

Professor Gunnar Myrdal, a Swedish economist, is positively hostile to the idea of defining the subject-matter of Economics. "Such definitions," he remarks, "are both unnecessary and undesirable. They are unnecessary, for the one concept which an economist need not define precisely is Economics. No argument can possibly be affected by such a definition, just as no chemist can draw any scientific conclusions from a definition of the concept "chemistry".[35]

Professor J. M. Clark, an American economist, was equally critical of attempts at delimiting the field of Economics when we recall his dictum that "it is unscientific to exclude any evidence relevant to the problem at hand."[36] In fact, the use of the scientific method in social sciences like Economics dictates comprehensiveness *i. e.* taking into account all the relevant factors even though some of them may be non-economic in nature. If once the economists realise this and act accordingly,

34. Von Mises : *Die Gemein wirts-chaft,* English Translation, p. 124.

35. Gunnar Myrdal : *The Political Element in the Development of Economic Theory* (1953), Routledge and Kegan Paul Ltd. London, p. 155.

36. J. M. Clark : *The Socialising of Theoretical Economics* in Preface to *Social Economics,* p. 5.

they shall no more be guilty of having succumbed "to an all-too-prevalent methodological fanaticism, which prefers the accurate but superficial to the approximate but fundamental, and which makes adaptability to its special technique of investigation, rather than importance, the standard for the selection of problems and the delimitation of the scope of its inquiry".[37]

In fact, the intrinsic connection between the economic and the non-economic is so close and intimate, argue these economists, that it is impossible to define the subject-matter of Economic Science accurately. Any definition of the scope of Economic Analysis is likely to yield only a misleading picture of the various problems, which Economics has to deal. That is why, it is pointed out, attempts made in the past to circumscribe the actual field of economic studies have failed. Some of these definitions were too narrow and restricted in nature, leaving out several important economic problems from their orbit. Hence it would be difficult, if not impossible, to attempt a clear-cut delimitation of the scope of Economics. Even if the delimitation of the scope of Economics were not difficult, it would still be unnecessary, as Myrdal argues, to have it, because such a delimitation is not going to render any help to the individual economist in the discovery and deduction

37. Jacob Viner: "The utility concept in value theory and its critics" published in the *Journal of Political Economy*, XXXIII (1925) p. 659.

of specific laws. For instance, the rejection of 'welfare' definition and the acceptance of the 'scarcity' definition in its place is not going to help in any way the task of the analytical economist in the formulation of economic generalisations. Why then bother so much about the 'niceties' of definitions ?

The advocates of 'definitions,' on the other hand, point out that the delimitation of the subject-matter of Economics is necessary in order not to leave too much freedom to the individual economist. The non-existence of a 'specific' definition will leave too much discretion with the individual economist, which may be misused. All sorts of extraneous things may be brought in, endangering the very identity and individuality of the Science of Economics. It is this danger which stares Prof. Robbins in the face, when he advocates delimitation of the field of Economics with a view to preventing "the preoccupation with the irrelevant—the multiplication of activities having little or no connection with the solution of problems strictly germane to his (economist's) subject"[38]. To this, the no-definitionists reply that it is often difficult to separate the 'relevant' from the 'irrelevant' and it may even be detrimental to attempt this segregation on two grounds. ***Firstly,*** it shall tend to reduce the Economic Science to a closed system of thought, because whatever argu-

38. Robbins: *An Essay on the Nature and Significance of Economic Science*. p. 3.

ments prove inconvenient to a particular theorist shall be dismissed on the ground that they are not relevant or germane to the subject under discussion. *Secondly*, the attempt to strictly delimit the subject-matter of Economics and of other social sciences has led to the emergence and multiplication of artificial barriers between the various social sciences. This division of social sciences into water-tight compartments is not at all desirable and is even harmful in the larger interests of social and economic research. It may even retard the orderly development of the various social sciences. As William Kapp has aptly said, "The departmentalisation of the social sciences as, indeed, of all sciences, tends to obstruct and defeat the search for truth by restricting the scope and horizon of scholarly inquiries."[39]. The late Dr. Marshall, although he attempted to delimit the scope of Economics through his well-known definition, was at heart a firm believer in the Principle of Continuity. At the very title page of his *Principles of Economics* appears the dictum "*Natura non facit saltum*" which is only another way of expressing the great Principle of Continuity. In his preface to the First Edition of his *Principles*, Marshall remarks, "If the book has any special character of its own, that may perhaps be said to lie in the prominence which it

39. K. William Kapp : *The Social Costs of Private Enterprise* (1950) Harvard University Press, Cambridge, Massachussets, p. 14.

gives to............applications of the Principle of Continuity...........Great mischief seems to have been done by drawing broad artificial lines of division where Nature has made none" (pp. viii-ix). The last sentence is particularly significant. The no-definitionists, therefore, advocate not mere *collaboration* but the closest possible *integration* and *synthesis* of the various social sciences. The latest developments in all the social sciences *i.e.* sociology, politics, history, law, ethics and psychology need to be assimilated for a proper understanding of economic problems. The only boundary line which must not be abandoned, nay, even be strengthened, is, as Myrdal[40] has pointed out, the line between science and pseudo-science.

40. Myrdal-*Ibid.* p. 237.

# CHAPTER II

## SCOPE OF ECONOMICS

"But there will, I think , be general agreement that in the the sciences of human society, be their appeal as bearers of light never so high, it is the promise of fruit and not of light that chiefly merits our regard. "(A. C. Pigou : *The Economics of Welfare*, p. 4)

"And the test of a theory's goodness is its usefulness in illuminating observational realities "(P. A. Samualson : *Economics—An Introductory Analysis*, p. 8).

### 1. ECONOMICS—A SCIENCE

We have seen in the preceding chapter how the issue of the definition of Economics has been a controversial affair. In a like manner, the scope of Economics too has not been free from controversy. Scope means province or the field of study. In discussing the scope of Economics, we have to indicate whether it is a science or an art. a positive science or a normative science, whether it can pass moral judgments on economic matters.

In order to decide whether Economics is a 'science' or an 'art', we have first to understand what the terms 'science' and 'art' really mean. The term 'science' has been defined as a systematised body of knowledge which traces the relationship between cause and effect. A science is not a mere collection of facts, because a mere collection of facts can never constitute a science. As Poincare has aptly remarked, "Science is built up of facts

as a house is built up of stones; but an accumulation of facts is no more a science than a heap of stones is a house,"[1] In other words, the facts should be systematically collected, classified and analysed. Applying this definition to our subject, we find that Economics is a branch of knowledge where the various facts relevant to it have been systematically collected, classified and analysed. The whole subject has been systematically divided into four major departments *viz*. Consumption, Production, Exchange and Distribution. Again, economic theory explains in a scientific manner the relationship between the causes and effects of economic phenomena. Judged from this stand-point too, Economics is a full-fledged science.

Another attribute of science is that its phenomena should be easily amenable to measurement. Some scientists go so far as to insist upon this strict requirement of science. Lord Kelvin once said, "I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind."[2] Measurability is, therefore, a strict and essential characteristic of science. In so far, therefore, as we fail to clothe our ideas in

1. M. Poincare : *Science and Hypothesis*, p. 141. Quoted by Pigou in his *Economics of Welfare* p. 7.

2 S. P. Thompson : *The Life of Lord Kelvin*, (*1910*), Vol. II, p. 792.

exact mathematical form, our subject shall fail to attain the strict attributes of science. Reverting to Economics, let us see how far the economic phenomena are amenable to measurement, As is well-known, the economist has in his possession the *measuring rod of money* with which he can easily measure individual and business motives. As Marshall observes, "Money is never a perfect measure ……… ………it is not even a tolerably good measure unless careful account is taken of the general conditions under which it works, and especially of the riches or poverty of those whose action is under discussion. But with careful precautions money affords a fairly good measure of the moving force of a great part of the motives by which mens' lives are fashioned."[3] And it is the measurability of economic motives that has bestowed a certain amount of exactness on Economics. As Marshall remarks "……… and it is this definite and exact money measurement of the steadiest motives in business life, which has enabled Economics far to out-run every other branch of the study of man. Just as the chemist's fine balance has made chemistry more exact than most other physical sciences, so this economist's balance, rough and imperfect as it is, has made Economics more exact than any other branch of social science."[4] No doubt, Economics is more exact than any other social science, but it is not as

3. Marshall : *Principles* p. 39.
4. *Ibid*, p. 14.

exact as the natural or physical sciences. The reason is that Economics deals with human beings endowed with freedom of will; men and women with different temperaments, tastes and whims. As such, they are not likely to behave in the same, uniform way in which matter does. Since matter, which is devoid of will, is the subject of physical sciences, they are more exact than Economics. As Marshall remarks, "..............the forces of which Economics has to take account are more numerous, less definite, less well-known and more diverse in character than those of mechanics while the material on which they act is more uncertain and less homogeneous."[5] The reference in the last sentence is to the non-homogeneous character of human beings. We shall have more to say on this point in a succeeding chapter. Here it is enough to say that Economics is a science, though it is not as exact as the physical sciences.

Some writers seem to imagine that Economics cannot be given the dignified status of a science, because economists do not agree among themselves. As a matter of fact, this is one of the charges that Mrs. Barbara Wootton has brought against economics. "Whenever six economists are gathered," says she, "there are seven opinions."[6] She further says, "Economists are under the suspicion of being charlatons and they cannot afford to arrogate honourable titles to themselves.......In the increas-

5. *Ibid.*, p. 772.
6. Barbara Wootton : *Lament for Economics* (1938), p. 14.

ingly common application by theoretical economists of the term 'science' to their studies, there is an element of wishfulness."[7] It is undoubtedly true that economists disagree on some of the fundamental problems of Economics. But this is no reason for denying Economics the status of a science. Economics is a science inspite of these differences. As Zuethan has remarked, Economics is yet an unfinished science. It is a growing and a developing science. In a growing and a developing science, there is always room for differences of opinion. In fact, the existence of differences is a healthy sign of the vigour and vitality of a science. Complete agreement among economists is not essential to give Economics the status of science. If Economics satisfies the requirements of a science, then it is a science despite the differences among economists.

Another ground on which the status of science is sought to be denied to Economics is its so-called inability to predict the future course of events as accurately as the physical sciences like Chemistry and Physics can.[8] It is, no doubt, true that Economics cannot predict the future course of events as accurately as the physical and natural sciences and

7. *Ibid.*, p. 112.

8. Professor Sidney Schoeffler considers Economics' inability to predict as a major failure. He illustrates the point by reference to various attempts in this regard in the field of micro and macro-economics. ( *The Failures of Economics, A Diagnostic Study*, 1955 )

it very often happens that economic prophecies are falsified by subsequent events.[9] But for this failure we cannot blame Economics or the economists. Nor can we deny the scientific nature of economic studies. The only reason for this lack of accurate predictability is that Economics deals with highly complex and variable forces, some of which are not amenable to correct prediction. Economics deals with men endowed with freedom of will and there is no guarantee that they will act in a pre-conceived manner. As such, economic forecasts may not be borne out by subsequent events. Does this suffice to challenge the scientific nature of economic studies? If that were so, then Meteorology could not be considered a science, because more often than not, the meteorological forecasts also prove false. Shall we, on this ground, deny the status of science to Meteorology? In fact, in certain respects economic forecasts are more reliable than meteorological forecasts. The onset of a trade depression, it is said, can be predicted more accurately than the coming of cyclones. Hence the status of science should not be denied to a branch of knowledge merely on the ground that its devotees lack precision and prophetic power.

In our opinion, therefore, Economics rightly

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9. For example, in 1930, the late Lord Keynes prophesized that the fall in prices on the New York Stock Exchange would soon stop and would be followed by a rapid industrial expansion. But the stock prices continued to fall and the world was plunged into the biggest depression known to history.

theory of exchange offers not a little help in price-fixation, particularly under monopoly conditions. Are not the railway authorities aided in the task of rate-fixation by the principle of "what the traffic can bear"? The study of monetary Economics affords us invaluable help in evolving the best possible monetary system for the country. At the sametime, this branch of Economics equips us with effective weapons to fight against both inflation and deflation. The modern theory of employment affords practical guidance to modern governments in combating cyclical unemployment.[13] A study of the theory of banking throws a good deal of light on the complex banking problems and helps in evolving a correct and infallible central banking policy. The study of public finance equips a Finance Minister with the knowledge of various canons of taxation which he can employ as infallible guides in levying new taxes or enhancing old ones. Parallel to this, there are the canons of public expenditure too which dictate a wise, well-distributed and balanced government-expenditure. In a word, these canons whether of taxation or of expenditure afford invaluable guidance for the proper husbanding of public resources. The problem of war-finance is again one to the solution of which public finance has the greatest contribution to make. The list is by no means exhaustive. In the

13. Just how the modern theory of employment helps in combating cyclical unemployment, the reader is referred to the present writer's book entitled, "*An Introduction to Keynesian Economics*" (1957) published by Lakshmi Narain Agarwal, Agra.

face of this evidence, it would be futile to deny that Economics also partakes of the character of an Art. It would, therefore, be best to say that Economics is both science and art *simultaneously*. This, we believe, is a sane and balanced attitude. No doubt, most of the English economists insist upon treating Economics as a science. Their argument is that it is only by treating Economics as a science that we can build up its scientific status. If Economics is also to be treated as an art at the same time, this shall prove an hindrance in building up its scientific status and then the art of Economics too shall be a very imperfect art. The function of Economics, according to these economists, is simply to "explain and explore" and not to lay down precepts for the attainment of given ends. Such an attitude, in our view, is a narrow or restricted one. We fail to understand how the task of building up the scientific status of Economics shall suffer if we treat Economics as an art at the same time. In our judgment, the task shall rather be facilitated than impeded, because every science has an 'art' or the practical side while every art has a theoretical or the scientific side. There is much truth in what Cossa (already quoted) said more than half a century ago. "Science requires art; art requires science, each being complementary to the other." There is wisdom, therefore, in regarding Economics as both a science and an art at the same time. Says A. C. Pigou, "But there will, I think, be general agreement that in the

deserves the title of science and those who challenge its scientific character seem to have closed their eyes to the basic 'realities' of the situation.

## 2. ECONOMICS—AN ART.

It is now settled that Economics is a science The question can, however, be raised : Is it an art as well ? The answer to this question depends upon what we consider to be an 'art'. An 'art' is also a systematised body of knowledge, but unlike a science it lays down precepts or specific solutions for specific problems. As J. N. Keynes has put it, an art is a system of rules for the attainment of a given end".[10] The object of art is the formulation of precepts immediately applicable to policy. The practical aspect of the art distinguishes it from science which may be merely theoretical. Luigi Cossa, an Italian economist, in his inimitable style, has aptly differentiated a science from an art.

"A science, rigorously so-called, is any reasoned or theoretical body of knowledge that explains a group of homogeneous phenomena with the purely speculative aim of attaining complete knowledge in that field. An art, on the contrary, has to do with what is vaguely called applied knowledge... the function of an art is to supply norms, rules, maxims—choose what name you will and to indicate what means are most appropriate to a given end. An art has nothing to do with truth beyond taking

10. J. N. Keynes : *Scope and Method of Political Economy*, p. 46.

it for granted; art does not explain theorems ; it solves general problems. Its aim is not speculative but operative and it is not concerned with laws, but only with rules that simplify practice.......A science teaches us to know; an art teaches us to do. In a word, science explains and expounds; art directs; art imposes precepts or proposes rules,"[11]

Cossa further emphasizes the complementary nature of the two by saying, "science requires art, art requires science, each being complementary to the other."[12]

Applying this definition of art, we find that Economics is, in certain respects, an art as well. There are several branches of Economics which offer us practical guidance in the solution of economic problems. The theory of consumption provides us with the well-known law of substitution, which tells a consumer how to maximise his satisfaction from his expenditure. Does it not offer practical assistance in solving an important problem with which every one of us is confronted in daily life ? Does it not afford assistance to governments as well in distributing expenditure on the various heads ? The theory of production offers not an inconsiderable help in the task of industrial organisation and minimisation of costs. Do we not study here the concept of the optimum firm ? The

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11. Luigi Cossa : *An Introduction to the Study of Political Economy*, (1893) published by Macmillan & Co , Ltd. pp. 43-44.

12. *Ibid.*, p. 44.

sciences of human society, be their appeal as bearer of light never so high, it is the promise of fruit and not of light that chiefly merits our regard." Economics shold, thus, be both a light-bearing and a fruit-bearing science.

## 3. ECONOMICS—PURE AND APPLIED.

Some economists, instead of considering Economics a science and an art, prefer to bifurcate it into *Pure Economics* and *Applied Economics.* The late Dr. Marshall set the ball rolling in this direction. Today, the distinction between *Pure Economics* and *Applied Economics* is more current and popular than the old distinction between Economics as a science and Economics as an art. In our view, the former distinction *viz.* Pure Economics and Applied Economics is better, more scientific, more dignified and conducive to better understanding. Other scientific studies also observe a similar distinction. It has, therefore, come to stay in Economics, The reader, however, should have no misconception as to the nature of this distinction between pure science and applied science. As Prof. R. T. Bye remarks, "Pure science confines itself to accurate description of phenomena; it explains what is and how it works and what are its effects but it does not concern itself with what ought to be, nor tell us whether the effects are good and bad......applied science takes the knowledge acquired from pure science and applies it to such problems. Pure science furnishes the tools with which applied science works. The two go hand-

in-hand, but the former must precede, for without it the latter is without the proper means for the accomplishment of its task. The distinction between the two is especially important in economics... we can never hope to solve the pressing economic problems confronting the world without a thorough, reliable, unbiassed understanding of the economic system as it is now and a knowledge of how it works.......A division of labour between the analytical, descriptive work of economics and the applied welfare-seeking activities is altogether good, but the two groups need to keep in touch with each other".[13]

The late Dr. Marshall observes the distinction between *Pure Economics*[14] and *Applied Economics* in these words, "Some parts of Economics are relatively *abstract* or *pure*, because they are concerned mainly with broad general propositions; for, in order that a proposition may be of broad application, it must necessarily contain few details; it cannot adapt itself to particular cases; and if it points to any prediction, that must be governed by a strong conditioning clause in which a very large meaning is given to the phrase "other things

13. See R. T. Bye's article, "Some Recent Developments of Economic Theory", published in R. G. Tugwell's *Trend of Economics*, pp. 290-91.

14. Cossa observes the corresponding distinction as *Reasoned Economics* and *Practical Economics* (See L. Cossa : *An Introduction to the Study of Political Economy*, (1893), p. 15. Prof. A. C. Pigou calls *Applied Economics* as *Realistic Economics*. (See his *Economics of Welfare*, p. 6.)

being equal." ............Other parts are relatively applied, because they deal with narrower questions more in detail; they take more account of local and temporary elements; and they consider economic conditions in fuller and closer relation to other conditions of life."[15].

In recent years, *Applied Economics* has received greater attention at the hands of economists and there have been several publications on *Applied Economics* both in the U. K. and the U. S. A.[16]. Perhaps this is a reaction to the extremist *positivism* of Robbins who insists upon treating Economics as *strictly* a pure science. The younger economists are now turning more and more to empirical studies aimed at solving social problems. In fact, Applied Economics has to-day become more popular than Pure Economics. Professor George J. Stigler's definition of an economic theorist is "one who spends more than half of his professional time theorizing on economic problems." If this definition is applied to present-day economists, then, according to Professor Stigler, at least 90 per cent. of them spend over half of their time on applied or empirical subjects, and, in fact, only a small minority are interested in *advanced* theoretical discussions. What could be a more reliable test

15. Marshall's *Principles*—footnote on p. 37 (Eighth Edition).

16. In recent years, there have been three well-known Publications on *Applied Economics* by Bye, Brown and E. H. Phelps-Brown. The last one deals with several important problems of practical interest.

of the popularity of the *applied* or empirical studies? In India, too, the 'pure' studies in Economics are conspicuous by their absence. It would not be an exaggeration to say that more than 98% of the Indian economists are devoted to *applied* studies. There has hardly been any contribution worth the name to *Pure Economics*. This is true not only of India but of all the under-developed countries of the East. Perhaps there is a reason for it. Economists in these countries are interested more in economic development than in the forging of *theoretical tools*. So far, so good. But how much justification is there for using theoretical tools forged in the industrially-developed countries of the West? Are we not blindly following the theories and the dogmas formulated by the western economists? Is it not high time that we forge our own theoretical weapons for the solution of our pressing economic problems? Is it not necessary to evolve a theory of economic development eminently suited to our conditions? While it is not denied that *Applied Economics* has its manifold uses in an under-developed country like India, it should at the same time be explicitly understood that *Pure Economics* cannot and should not be neglected. It should receive due recognition at the hands of Indian economists. Tool-making and tool-using are complementary processes and should go side by side.

### 4. ECONOMICS—POSITIVE AND NORMATIVE

The question whether Economics is a positive

or normative science has been debated times out of number. There is, of course, no disagreement on the positive character of Economics. Both the sides seem to agree that there is a science of Economics. The dispute, however, arises when it comes to discussing Economics as a normative science. And this dispute is perhaps as old as Economics itself. There have been in the past two distinct schools of thought on this issue. The old English Classical School of economists held that Economics was purely a positive science and its devotees had no right to comment upon the rightness or wrongness of economic phenomena. The Historical School of Germany held just the contrary view and firmly believed that Economics should not cut itself apart from ethical considerations. For a long time, the controversy continued unabated between the two rival schools. Lest the reader should get an erroneous impression, let it be made clear that the controversy did cut across national boundaries. In England, there were economists, who did not see eye to eye with the Classical School on this issue. Likewise, in Germany too, there were economists who did not quite relish the stress on the normative character of Economics. But, broadly speaking, the majority of British economists were positivists; while the overwhelming majority of German economists were normativists.

In order to understand this controversy and its implications, it would be essential to know first the meanings of the two terms *positive* and *normative*.

J. N. Keynes has appropriately expressed the distinction between the two thus: "A positive science may be defined as a body of systematised knowledge concerning *what is*; a normative science or a regulative science is a body of systematised knowledge relating to criteria of *what ought to be*, and concerned with the *ideal* as distinguished from the actual...The objective of a positive science is the establishment of uniformities; of a normative science the determination of ideals",[17] In other words, a positive science deals with *things as they are.* It explains their causes and effects. But it remains strictly *neutral* as regards ends; it refuses to pass moral judgments. A normative science, on the other hand, deals with *things as they ought to be.* It has no objection to discussing the moral rightness or wrongness of things. To illustrate the difference between the two, let us take some examples from Economics itself. What determines the rate of interest in a community? What are the forces which influence the determination of the rate of interest? An enquiry into these forces shall partake of the character of a positive enquiry, because here the things are to be discussed as they actually are. What constitutes a fair rate of interest? An enquiry into this shall immediately become a normative enquiry, because here we are required to discuss things as they ought to be. In deciding upon a fair rate of interest the ethical considerations

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17. See J. N. Keynes: *Scope and Method of Political Economy*, p. 16.

shall have to be taken into account. A normative enquiry is, therefore, linked indissolubly with ethical considerations. A positive enquiry, on the other hand, cuts itself apart from ethical motives. To give another example, a study of the distribution of the incidence of taxation belongs to the sphere of Positive Economics, because the object of the study is simply to find out how the burden of taxation is distributed amongst the various sections of the community. If, however, the object of the study is to see whether the incidence of taxation is distributed *justly* amongst the various sections, then immediately it becomes a normative study with an emphasis on morality and justice.

As pointed out above, the old English Classical School wanted to divorce economic analysis from ethical considerations. The German Historical School, on the other hand, was equally insistent upon associating Ethics with Economics. The controversy had somewhat flagged towards the close of the first quarter of the 20th century, when it was given a fresh lease of life by the publication of Professor Lionel Robbins' *An Essay on the Nature and Significance of Economic Science* during the thirties. As said elsewhere, the publication of this book created almost a sensation in the world of economists. The book had the immediate effect of flogging the dead horse of controversy. The controversy re-appeared in an intensified and perhaps a much more bitter form. The cease-fire was a thing of the past, and once again the war raged in all its fury.

Perhaps no other work in recent memory has caused so much controversy as Robbins' *Essay*. Let the reader take note of the fact that Professor Robbins is the 20th century's most authoritative representative of the Old Classical School of Britain. His *Essay* is nothing if not a re-statement, howsoever refined and developed, of the views of the Classical School of Smith, Ricardo and Malthus. He is the most outspoken champion of pure logic and positivism. His views on the scope and methodology of Economics are, without the slightest difference, the views of the Old Classical School. Robbinsianism is old wine poured in new bottles. It is on this ground that Robbins and his followers are dubbed as the Neo-classical School. This School insists upon treating Economics as a pure and positive science rather than a social study. The chief characteristics of this School are obscurity, verbosity and hair-splitting. Even the simplest conceptions are presented in such a manner as to make them look complex and incomprehensible. Robbins' *Essay* furnishes several such instances. If this School had its way, it would make Economics a closed book, for the majority of economists even. Economics would then become a close preserve of the select few. Fortunately, the fantastic ideas of this School are not relished much even in Britian. The late lord Keynes, referring to the School, remarked, "The wild duck has dived down to the bottom as deep as she can get and bitten fast hold of the weed and tangle and all the rubbish that is down there, and it would need on extra-ordinarily clever dog to dive

after and fish her up again".[18] No one could have used a more pungent and derogatory language to censure the economists belonging to the Neo-classical School. The *New Statesman And Nation* of Britain referred to them in a very apt and appropriate language thus : "These economists are not fools but just pure economists. They know everything about the science of pure economics and nothing of the old art of political economy; they are largely responsible for the discredit into which the science has fallen. They have no social imagination and, therefore, no social sympathy, and as a result they have sold the goodwill of liberal economics for a mess of analytical pottage." (4th January, 1941).

This extract from the *New Statesman And Nation* rightly blames the economists of the Neo-classical School for their lack of social sympathy and it is this lack of social sympathy in them which leads them on to declare Economics a pure science, a science having nothing to do with practice or promotion of welfare. Once they were determined to maintain this 'purism' it was not difficult for them to catch hold of arguments in support of their contention. The 'purists' put forth the following arguments in support of maintaining the positive character of Economic Science :—

(i) There shall be a good deal of confusion in the minds of inquirers if the inquiries as to *what is* are linked together with the

18. J. M. Keynes : *The General Theory of Employment, Interest and Money*, p. 183.

inquiries as to *what ought to be.* Such a confusion cannot be conducive to the proper and orderly development of the science of Economics. In fact, the scientific foundation of Economics would not be secure if the two types of inquiries were not segregated. For example, if we discuss the factors determining the rate of interest simultaneously with what constitutes a fair rate of interest, it cannot but seriously hamper our study of the subject.

(ii) The progress of the young science of Economics would be gravely jeopardised if it is not treated strictly as a positive science. There cannot be much scope for disagreement in inquiries regarding *what is* because such inquiries are merely concerned with facts as they are. In the inquiries regarding *what ought to be,* there can be a vast scope for disagreement and even controversy. People generally do not readily agree on how things ought to be, because they have their own ideas regarding the desirability of a particular course of action. The intrusion of ethical considerations into purely economic matters, it is argued, would multiply and perpetuate sources of disagreement. Why ? As Professor Schumpeter has said, "Economists would generally judge others from their own moral standards. Marshall, for instance, had a very definite conception of the Noble Life. It does not take much trouble to realise that this conception was shaped on the model of the typical life of a Cambridge Professor. Tastes, pursuits and levels of comfort different from this concep-

tion, he, at best, viewed with indulgence but without ever embracing them with full understanding."[19] As such, the economists, it is argued, should refrain from making value judgments.

(iii) The attempt to combine inquiries regarding *what is* with inquiries regarding *what ought to be* shall place the economist in a very awkward position. He shall have to express on every occasion an ethical judgment on his findings, which shall render his task much more arduous and difficult of performance. Moreover, where the economist does not censure or condemn, he shall naturally be understood to approve or atleast to excuse. Such an inference, very often, may be totally wrong and unwarranted. The economist would, therefore, constantly be exposed to the risk of being misunderstood.

(iv) *Again, the attempt to combine theoretical* and practical inquiries by the economists may tend to mislead the public at large. What the economist lays down as theorems of pure science may be interpreted by the public as if they were maxims for practical guidance. Such an interpretation (or, shall we say, misinterpretation) would not be unnatural unless the economist explicitly distinguishes the 'theorems' from the 'maxims', and says so in the clearest possible language to avoid public confusion.

That the Classical and Neo-classical economists

19. J. A. Schumpeter: *History of Economic Analysis* (1954), p. 129.

were so much enamoured of the 'positive' character of Economics would be evident from the remarks that some of them made on this issue. Senior, for instance, said, "An economist is not authorised to add even a single word of advice." Cairnes emphasised the neutrality of ends in no uncertain terms. "Economics," he said, "is neutral in the same way as the study of mechanics is neutral in relation to alternative methods of building railways or in the same way as chemistry remains neutral in the face of various sanitary projects." Schumpeter speaks of the normative motive as the "enemy of patient analytic work." M. Pantaleoni, a staunch advocate of Pure Economics, brands normative studies as mere "prologomena or even digressions." Professor Strigle dubs normative study as "Datenanderungen" which in English may be rendered as an inexact and an inferior activity in an irrational field of study. Professor Robbins, the leader of the Neo-classicists, has reaffirmed the old classical neutrality between ends. According to him, Economics is not concerned with the desirability or otherwise of ends. "The role of the economist is more and more conceived of as that of the expert who can say what consequences are likely to follow certain actions, but who cannot judge as an economist the desirability of ends." He further observes, "Economics deals with ascertainable facts ; Ethics with valuations and obligations. The two fields of inquiry are not on the same plane of discourse. Between the generalisations of positive and normative studies there is a logical gulf fixed which

ingenuity can disguise and no juxtaposition in space or time bridge over. Propositions involving the verb 'ought' are different in kind from propositions involving the verb 'is'". In his view, a wide gulf separates the positive and normative studies and nothing can bridge this gulf. To him, Economics is value theory and value theory is Economics. It has no normative implications. As he remarks, "There is no penumbra of approbation around the theory of value. Equilibrium is just an equilibrium," Professsor Robbins is explicit on the point that the economist is not to approve or disapprove economic equilibrium. He must accept it as it is. The consequences of equilibrium, no matter how unpleasant, must be accepted without question, because they are the consequences of an equilibrium. Equilibrium, he seems to imply, is something sacred and sacrosanct. It must be worshipped. But do we or can we consider this a sound view? Are we going to worship the equilibrium? We do not think any person, with a balanced mind and a grain of human sympathy, can ever agree to such an atrocious view as this. To illustrate, the rate of interest in an Indian village is generally exorbitant, something beyond the capacity of the average *ryot* to pay. No doubt, it is the result of an equilibrium between the demand and supply of capital in the village. But can we justify this exorbitant rate of interest? Robbins would accept it, because it is the result of an equilibrium, and he would rule out any attempt to regulate or control it. No government can, how-

ever, agree with such a view. As we know, several state governments in India have enacted legislation to regulate the rate of interest to save the *ryot* from exploitation. Another example: The wages of Indian coal-mine workers are extremely low despite the unpleasant and hazardous nature of the work that they are called upon to do. It cannot be denied that these low wages are again the result of an equilibrium between the demand and supply of labour. On account of surplus labour, the wages get unduly depressed particularly at a time when the agricultural operations are at a standstill because a sizable portion of mining labour is drawn from agricultural workers. Shall we, then, reconcile ourselves to low wages simply because they are the result of an equilibrium? No modern government can afford to accept Robbins' advice in these days of democracy and adult franchise. Remember, Robbins' plea is a plea for *laissez-faire* under the cloak of equilibrium. *Laissez-faire* is an outdated, obsolete and discredited doctrine. It is gone; perhaps never to return. We, therefore, cannot agree with Robbins' views. The various arguments adduced by the Classicists and the Neo-classicists are, to say the least, filmsy, unconvincing and untenable. If Economics is to serve as "an engine of social betterment", it cannot divest itself of normative functions. As Prof. Thomas has said, "the function of the economist is not only to *explain and explore* but also to *advocate and condemn.*"

There is quite a large body of economists who

insist upon the assignment of normative functions to Economics. Hawtrey says in a forthright manner, "Economics cannot be dissociated from Ethics." Durbin is impatient with Pure Economics when he says, "our pure theory is developing at a bewildering rate into an unintelligible thicket of complex variables and mathematical symbols." Fraser says, "Economics is something more than mere value theory or equilibrium analysis." Wolfe is more specific when he remarks, "A non-psychological Economics must, therefore, be regarded as either superficial figment or as positively non-scientific. It is Hamlet with Hamlet left out." Paul Streeten has concluded in an article, "Economists cannot and should not refrain from making value judgments if their studies are to be more than a purely formal technique of reasoning, an algebra of choice. The technique, the algebra, is important and ought to be as scientific as possible, but it is significant only as a means to a study of wealth and welfare and of the ways to improve them."[20] The case for normative Economics is thus well-fortified. Furthermore, it is difficult to have an exclusively positive science even if we desire to do so. After all, the economist himself is a man of flesh and blood, having his own passions and prejudices. Howsoever hard he may try, he cannot keep out his own passions and prejudices when dealing with subjects like the institution of

20. Paul Streeten: Economics and Value Judgments, published in the *Quarterly Journal of Economics* (1950), p. 595.

private property or an ideal economic system. He cannot be as objective in his investigations as the physicists or the chemists can. The latter study matter in which their own passions and prejudices have hardly any relevance. They can easily put their passions and prejudices in the cold storage while conducting scientific investigations. Not so the economists. The economists cannot, therefore, have a pure, positive science of Economics, even if they wish to do so, Their findings and investigations shall, willy-nilly, be coloured by their personal prejudices. Nevertheless, the economists should try as far as possible to separate their unbiassed analysis of *what is* from their personal views of *what ough to be* As Erich Roll puts it, "We should distinguish between our positive and our normative statements. There is no reason why economists should not be partisans as other people. But they must be constantly on their guard to rule out normative elements from their theoretical analysis ; and to state explicitly when they are including them or when they are drawing conclusions from their positive theory which refer to what they regard as desirable courses of action."[21]

## 5. ECONOMICS AND PUBLIC POLICY*

We have already discussed in the preceding

21. Erich Roll : *The Element of Economic Theory*, p. 31.
* To get an idea of the role that the economist plays in the formulation of public policy, the reader is referred to an excellent recent book, *The Role of the Economist as Official Adviser* (1955) by Professor W. A Johr and Dr. H. W. Singer.

sections that Economics is an applied science and as such it provides active guidance in the solution of economic problems. We shall now study how far Economics can help in the formulation of economic policies. Since its birth, Economics has always been concerned with the formulation of policies, despite what some economists may say. Most of the economists in the past have been using economic analysis as an instrument for economic betterment. Adam Smith, David Ricardo, J. S. Mill, Alfred Marshall and J. M. Keynes have all been influenced by strong policy motivations. Cournot, Walras and Schumpeter have been the few eminent exceptions in the past who were opposed to the use of Economics as an aid in the formulation of policies. In modern times, Professor Lionel Robbins, the leader of the Neo-classical School, has taken upon himself the task of dissociating Economics from policy formulations. The argument is the usual one that we have already examined in the preceding section *viz* that if Economics were to actively aid in policy-formulations, it shall lose thereby its 'scientific' character. How flimsy such an argument is, has already been demonstrated in the preceding section. According to Robbins, the role of the economist is to advise on means rather than ends; to place before the politician the consequences of the various alternative courses of action and to leave the question of the selection of ends to him. In other words, to use Erich Roll's phraseology, the economist is not to be the jury but only an expert witness. We

however, find ourselves unable to accept this view on the following grounds .—

(i) As Professor Robbins himself complains, the borderlands of Economics are the happy hunting grounds of the charlatan and the quack. If that is so, is it not the responsibility of the economist to oust them? And who can be in a better position to oust them than the economist? The economist, by virtue of his special knowledge and scientific training, is the ideal person to oust the tress-passers from his preserves. If the economist shirks policy-formulation, he shall surely be abdicating his responsibility to the charlatan and the quack.

(ii) The economist, as already pointed out, cannot put his passions and prejudices in the cold storage. It is difficult for him to be ideologically neutral while conducting economic investigations. For example, an economic analyst inquiring into the causes of the trade cycle shall select those variables which seem to him most significant. His findings shall necessarily be coloured by his personal prejudices.

(iii) An Economic Adviser dealing with complex economic issues cannot divest himself of value judgments. An Economic Adviser is not likely to prove useful to his Government if he is not willing to commit himself on policy issues.

The economists should, therefore, actively assist in policy formulations. Criticising Robbins,

the late Prof. Brij Narain once remarked, "The theory of Economics is barren if it has no light to shed upon economic practice. We have no interest in any equilibrium for its own sake, but only in so far as it is related to human welfare". Dr. Marshall also emphasized that "the dominant aim of Economics is to contribute to a solution of social problems."[22] To use Prof. A. C. Pigou's memorable words, "our impulse is not the philosopher's impulse, knowledge for the sake of knowledge, but rather the physiologist's knowledge for the healing that knowledge may help to bring."[23] The economist is to function like the physiologist rather than the philosopher. Prof. Smithies does not mince words when he remarks, "They (the economists) should diagnose and prescribe for the economic health of society."[24] This is an eminently sound advice, for the economist cannot delegate the prescription function to the quack and the charlatan. Economic maladies are not only to be diagnosed but also treated by the economists. To quote Prof. Pigou again, "Economics is chiefly valuable not as an intellectual gymnastic, nor as a means of winning truth for its own sake, but as a handmaid of Ethics and a servant of practice."

While there is considerable agreement on the point that Economics should furnish active guid-

22. Marshall : *Principles*, p. 42.

23. Pigou : *Economics of Welfare*, p. 5.

24. Arthur Smithies : *Economics and Public Policy*, (1955), p. 14, published by Brookings Institution, Washington.

ance in drawing up policy programmes, there are some leading lights who are of the view that the theory of Economics does not provide proven precepts immediately applicable to policy. J. M. Keynes said, "The theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw correct conclusions.[25] Marshall also took a similar view when he said, "Never again will a Mrs. Trimmer, a Mrs. Marcet or a Miss Martineau earn a goodly reputation by throwing them (general economic principles) into the form of a catechism or of simple tales by the aid of which any intelligent governess might make clear to her children nestling around her where lies economic truth, and might send them forth ready to instruct statesmen and merchants how to choose the right path in economic policy and to avoid the wrong......(Economics) is not a body of concrete truth, but an engine for the discovery of concrete truth, similar to say, the theory of mechanics.[26] Professor E. H. Phelps Brown in his recent work also stresses the point that. "economic theory does not itself provide answers to practical problems but is an equipment for use in the inquiry into them."[27] What Keynes,

25. J. M Keynes in Introduction to the Cambridge Handbook Series.
26. A. C. Pigou : *Memorials of Alferd Marshall.*
27. E. H. Phelps Brown : *A Course in Applied Economics,* (1952), p. 19, published by Sir Issac Pitman and Sons Ltd., London.

Marshall and Brown emphasize is that Economics does not provide maxims for practical economic conduct. The economists, they emphasize, can provide no ready-made solutions. Economics can only provide the mental equipment with which the solutions of important economic problems can be discovered. It is, as Marshall says, only "an engine for the discovery of concrete truth." While there is a large element of truth in what these eminent economists say, it cannot be denied that Economics does provide us with certain proven precepts immediately applicable in practical conduct. A tentative list of such maxims was drawn up in Section 2. Even if we wholly accept what Keynes, Marshall and Brown have said, the practical role of Economics does not vanish. It still remains intact. These eminent economists do not challenge the practical role of Economics. In fact, they are in sympathy with it. What they wish to stress is that Economics cannot provide ready-made solutions for economic problems. To arrive at solutions, the economists shall have to exert to the maximum their mental faculties and treasures of knowledge. It should, however, be stressed that if the economist is to aid in policy formulations as he must, then he should cease to be a mere narrow specialist. He should have some smattering of Psychology and other social sciences and some knowledge of technique too. As Fraser has said, "An economist who is only an economist is a poor pretty fish." Mill also said, "A person is not likely to be a good economist who is nothing else." He has clearly

in his mind the practical role of the economist when he said so. Furthermore, it should be remembered that the various social sciences in the ultimate analysis belong to one whole. It is, however, not implied that the economist should claim the whole field of social sciences as his province or should be an expert in all the social sciences. That perhaps is not possible or practicable. This, however, does imply that narrow specialisation should be avoided as far as possible, if the economist is to play the ambitious role taken upon himself.

The preceding discussion has revealed in an ample measure the wide and extensive scope of the science of Economics. Summing up, now, we can say that the scope of Economics comprises of the following branches :

(i) *Positive Economics* or *Economic Theory* or *Economic Analysis* is a study of *things as they are.* It comprises of a study of the laws, principles and theories of Economics.

(ii) *Ethical Economics* or *Normative Economics* or *the study of Economic Ideals* is the study of *things as they ought to be.*

(iii) *Practical Economics* is the study of the methods or means of realising economic ideals.

(iv) *Economic History,* as J. N. Keynes says, is the study of economic phenomena existing at any given period in the past, and traces the actual progress of such phenomena over successive periods. As we would see in the succeeding chapter, the

study of Economics would be incomplete without a study of Economic History.

(v) *History of Economic Thought* is "the history", as Schumpeter says, "of the intellectual efforts that men have made in order to understand economic phenomena or which comes to the same thing, the history of the analytic or scientific aspects of economic thought."[28] It is the study of the growth and development of Economic Science itself. How important is the study of Economic Thought for Economic Analysis shall be discussed shortly in the ensuing chapter.

28. J. A. Schumpeter: *History of Economic Analysis*, (1954), p. 3.

## *CHAPTER III*

# RELATION OF ECONOMICS TO OTHER SCIENCES

"The forces which make for rigid frontiers between the sciences are in any case too strong. They tend to preserve the *status quo* and impede scientific advance. They tend to impose an irrational limitation on the scientific horizon. We can hope for progress in the social sciences only if the frontiers which have been drawn in the past for didactic reasons are removed. The most promising advances to-day are likely to come from an exploration of these borderlands."

(Gunnar Myrdal: *The Political Element in the Development of Economic Theory, p. 155.*)

"I have been gradually coming under the conviction, disturbing for a professional theorist, that there is no such thing as Economics; there is only social science applied to economic problems.. .........The sensitive specialist in the pursuit of his problems everywhere finds himself on the frontiers of other disciplines."

(Kenneth E. Boulding: *A Reconstruction of Economics*, pp. vii-viii).

There are some writers, like Comte, who hold that the scope of any profitable study of man's action in society must coincide with the whole of social science. They argue that the various aspects of a man's life are so closely connected with each other that a separate study of any one of them is

futile; and they urge upon economists to abandon their special field of Economics and to work for the development of a unified and all-embracing social science. Such a view, howsoever desirable in itself, cannot be accepted because as Marshall points out, "the whole range of a man's action in society is too wide and too various to be analysed and explained by a single intellectual effort."[1] Any attempt to tackle all the aspects of human life simultaneously is bound to lead to utter confusion and chaos; besides, it would hamper the development of the unified science itself. But, by saying so, we do not suggest that there should be high dividing walls between the social sciences. There should rather be the closest possible co-operation amongst them. We are in agreement with Professor E. F. M. Durbin when he makes a strong plea for a "team-work by social scientists in attacking practical problems".[2] As emphasized earlier, if the economist is to fulfil his ambitious role of advising upon practical affairs and of formulating economic policies, then he must come out of his narrow shell and acquaint himself well with other related disciplines such as Political Science, History, Ethics and Psychology *etc.* Hitherto, as Pareto deplored, the economists had not paid "attention to such inter-relations, for

1. Marshall: *Principles*, p. 770.

2. E. F. M.: Durbin: "Methods of Research—a Plea for Cooperation in the Social Sciences", *Economic Journal*, XLVIII, p. 190.

mastering them is a long and fatiguing task requiring an extensive knowledge of facts." It is gratifying to learn that the barriers are now gradually breaking down and there has begun what we may call 'free trade" between the various disciplines. An increasing measure of unity between different sciences is being gradually perceived. Economics is now drawing freely upon other disciplines. Let us now discuss the relation of Economics to other sciences.

### 1. ECONOMICS AND HISTORY

As already indicated in the preceding chapter, the study of Economics is incomplete without a study of History. We, as economists, are primarily concerned with Economic History, although even Political History may have positive economic implications for us. As Professor Robbins has said, there is no segment of historical events with which we as economists may not be concerned. For instance, the Reformation in Britain is primarily a political event, but it does have strong economic implications for us *viz.* the changes in the distribution of property, changes in the channels of trade, changes in the incidence of taxes *etc.* which followed the Reformation in Britain. Economic History, however, is a part and parcel of the Science of Economics. It is considered an important branch of Economics. As already defined, Economic History is the study of economic phenomena existing at any given period in the past and traces the actual progress of such phenomena

over successive periods. Let us now discuss the various points at which Economic Theory and Economic History act and react upon each other.

Economic History serves an important purpose for the Economic Theorist. It serves him well when he is engaged in the explanation and illustration of economic theorems. His task is rendered lighter and easier with the assistance that he receives from Economic History. For example, the Quantity Theory of Money can be illustrated well by historical events such as the discovery of gold in the U. S A. during the Tudor Period. With each new discovery of precious metals, there was an expansion of money-supply which had its immediate repercussions on the price-level in the upward direction. Examples could also be given of the two world wars when money-supply expanded invariably in almost every country, giving birth to the economic phenomenon of inflation. The post-1920 German Inflation and the Pre-1948 Chinese Inflation are to-day considered classic examples of inflation. In a similar manner, the Theory of Wages can be explained and illustrated by the repercussions that the Black Death in 1348 produced on the supply of labour. A sudden decline of labour supply on account of the incidence of plague pushed up wages to very high levels. The Theory of the Trade Cycle is illustrated generally by drawing upon the experiences of the Great Depression of 1930. Furthermore, historical digressions may serve the useful purpose of enabling the students to understand and grasp a chain of

abstract reasoning in several of the tough theorems of Economics.

Economic History not only illustrates and confirms; but it may also criticise and condemn economic doctrines. The Malthusian Doctrine of Population which had the air of universal applicability, when it was first propounded, has now been falsified by the Economic History of Europe during the last 150 years or so. It has had little or no application to European countries though the same could not be said of the backward and under-developed countries of Asia. Economic History may and does reveal in no uncertain terms the relativity of important economic theorems. The Doctrine of Free Trade, which at one time was so popular in Europe has now been generally discarded in favour of the new Doctrine of Protectionism. It had to be given up because the conditions which were prevalent in the 19th century were no longer true of the 20th century. The economic theorems may be relative to place too. Thus the Keynesian Theory of Employment which is so very true of the rich and industrially advanced countries of the West has little application in the backward and under-developed countries of the East. The problem in the former is one of deficiency of demand while the problem in the latter is that of lack of adequate economic development. Besides its above services, Economic History also furnishes us with the raw materials with which the theoretical structure of Economics can be built up. In other words, it aids us in forging new theoretical tools for use in

economic analysis. As we would point out in an ensuing chapter, there are two principal methods of formulating economic laws *viz.* Induction and Deduction. The former is purely an historical method. It consists in building up laws and theorems on the basis of material furnished by Economic History. Let it be added that Economic History can be a rich source of material for forging new theoretical tools. The reader is well-acquainted with what has come to be known as Engel's Law of Consumption Was this law not built on the basis of empirical evidence ? Is this law not as good as any other economic theorem ? The Theory of Trade Cycle which is an important economic doctrine is again based upon historical material. The Malthusian Theory of Population too had its roots in history. Several other instances could be given of economic theorems raised partly or wholly upon material furnished by Economic History. Besides, as Professor Walter Eucken has admirably demonstrated in his recent work, Economic History *must* and can be combined in the treatment and solution of economic problems.[3] It can be a useful guide for tackling present-day problems

While Economic History is so very important for the sustenance of Economic Analysis, Economic Thought is not in any way less important for Economic Analysis. Economic Thought and Economic Analysis assist and control each other. To understand a particular economic theorem, it is essential

3. See Walter Eucken : *The Foundations of Economics,* 1950, published by William Hodge & Company Ltd., London

to learn something about its gradual development in the past. For example, the Modern Theory of Value cannot be properly grasped unless we are aware of the different stages through which it has passed in the past. The Modern Theory of Value is the resultant of the several contributions made by generations of economists in the past. It is necessary to be posted well with these contributions if our grasp of the theory is to be firm and secure. Likewise, the General Theory of Modern Banking cannot be adequately grasped without a proper study of banking evolution. Again, Economic Thought can serve to throw light on the economic conditions prevalent in a particular period of history. For example, the Gresham's Law while it gives us an important economic truth also tells us about the debasement of British currency by Queen Elizabeth. In a like manner, the study of the Theory of the Gold Standard throws a flood of light on the economic situation in Western Europe immediately before the First World War. The Purchasing Power Parity Theory of Gustav Cassel, while it provides us with a technique of determining rates of exchange between foreign currencies also serves to spotlight the war-time inflation in several European countries as a result of vast expansion of paper currencies. Besides, Economic Thought of the past can determine and influence the course of economic development in a country in the future. Some outstanding theorists may exert a profound and striking influence in shaping the economic destinies of nations. Adam Smith prepa-

red the way for the victory of *Laissez-faire* just as Karl Marx in the 19th century did the spade work for the triumph of Socialism. Can anyone deny today the tremendous influence which Marx had and continues to have in shaping the course of economic development in the world?

While Economics is so much indebted to History, History too, in its turn, receives its food and sustenance from Economics History without Economics is meaningless. History is not merely the history of kings and princes; it is the history of the masses as well. No history of the masses would be complete unless it reflected their economic conditions. In fact, the study of economic conditions is getting even more important than the history of political events. The study of economic conditions is a prelude to the proper understanding of political events. At the root of political events, there are strong economic forces at work. Unless we study those economic forces, our grasp of political events cannot be firm or secure. Who does not know that behind the two world wars there were strong economic causes at work? Much of the political friction that we come across in the world today is to be attributed directly to economic causes. "Poverty anywhere is a threat to prosperity everywhere." So long as poverty and prosperity continue side by side, there can never be real or durable peace in the world. That is the lesson of history which the world can ignore only at its own peril. This is no digression but a frank statement of the overwhelming importance of the Economic

factor. Historians cannot, therefore, afford to neglect or minimise the vital importance of Economics in their researches and investigations. Not only that. Historians are aided in no small measure by a knowledge of Economics in carrying on their researches and investigations. A study of Economics equips the historian well for the task of fact-selection. It teaches him what kinds of economic facts he should select for his study and investigation. It is only thus that historians can arrive at an accurate over-all picture of the economic conditions in a particular period of history. Some one has well-expressed the intimate relation between the two sciences in the following couplet.

"Economics without History has no root,
History without Economics has no fruit."

## 2. ECONOMICS AND POLITICAL SCIENCE

Economics and Political Science are sister sciences born out of Sociology. As such, the relation between the two is very intimate. Early writers used to consider Economics as one of the branches of Politics. Early Greek writers looked upon Economics as the art of producing revenues for the State. Even Adam Smith conceived of Economics as an instrument for promoting the interests of the State. The use of the expression "Political Economy" in the early stages of the development of the science is a clear indication of the close connection that was supposed to subsist between the two sciences then. No doubt, the

term "Political Economy" has now been replaced by "Economics", but it in no way reflects any loosening of the ties that bind the two sciences. The relationship is as close today as it was at any time. Some modern economists are so much impressed with the intimate relationship between the two that they are prone to regard them as being parts or branches of one Science. Professor Frank Knight, for instance, remarks that "Either Politics or Economics can be regarded as a sub-division of the other."[4]

It may be pointed out here that, of the two branches of Economics, Applied Economics is concerned more intimately with Political Science than Pure Economics; the reason being that Applied Economics deals with economic activities of the State. As we know, the conception of the modern state is altogether different from what it was in the 19th century. The State then confined itself to mere police-functions *viz.*, protecting the country against internal disorder or external aggression. The modern state, in addition to the police functions, has several developmental functions to perform. The modern state is now actively interested in promoting and quickening the tempo of economic development. In several countries, economic planning has been adopted as an instrument of economic development. The State control over economic life has been gradually increasing

4. Frank Knight: *Freedom and Reform*, p. 204, published by Harper Brothers (1947).

during the last few decades. Even in capitalist countries, the market mechanism does not function freely while in socialist countries it has been replaced altogether by State Planning Commissions.

Economics and Politics act and react upon each other at several points. Economics influences Politics; Politics in its turn affects Economics. History affords us several examples of their mutual inter-action. The Great Russian Revolution of 1917, which, *in our view, is the most significant* political event of the first half of the 20th century, was born purely out of economic causes. There was so much oppression and exploitation of the 'have-nots' by the 'haves' that in sheer disgust and desperation the 'have-nots' rose in revolt against the 'haves' and wiped them out of existence. Ultimately, a new political set-up entirely different from the old, came into being and persists even to this day. The Industrial Revolution of Great Britain is another instance how Economics influences Politics. Before the Industrial Revolution, the government was dominated by the landed aristocracy, but after the Revolution, as a result of urban industrialisation, political power shifted to the middle-class people. As said above, Politics in its turn also affects Economics. The economic life of a country is generally moulded and shaped by its political institutions. India would have been an industrialised country and economically much more prosperous, if she had not been under British Rule. It suited the interests of our erstwhile

British masters to keep India a backward agricultural country. Our flourishing handicrafts of the 19th century decayed merely because of British Rule. The existence of alien rule in India has done untold damage to her economy. And now after Independence, we find a welcome difference. India is now trying desperately to make up the deficiency in the economic field that she suffered as a result of centuries of colonial slavery. She is now trying rapidly to industrialise herself and to achieve a measure of self-sufficiency in respect of certain important items. The economic progress recorded by her during the last ten years is much more substantial than what she was able to achieve during her period of political bondage. The liberation of the country has released new forces in the political and economic spheres which are tending to change the very face of India.

Furthermore, political parties in democratic countries are generally organised on an economic basis. The U. K. furnishes a classic example of a Party System built up almost exclusively on an economic foundation. The Labour Party advocates nationalisation of important industries ; the Conservative Party wants to perpetuate private enterprise. In our country, unfortunately, the political parties like the Hindu Mahasabha, Jan Sangh, Ram Rajya Parishad, Muslim League *etc.* have been organised on a communal basis, although the National Congress, the Socialist and the Communist Parties have adopted strictly an economic basis to organise

themselves. The latter three parties have been fighting the recent elections mostly on the basis of their respective economic programmes. This is a happy sign of the progress of Indian Democracy. Modern governments too attach so much importance to economic considerations that they have been led to appoint special Economic Advisers to secure sound advice on economic problems. To-day, there is hardly any Ministry of the Government of India, which does not happen to have an Economic Adviser of its own.

Besides, there are certain subjects which are common both to Economics and Politics. Public Finance is one such instance. It is the common estate of both. The study of Public Enterprises is another field where the economists and political scientists have common interests. It is significant that the Indian Economic Association and the Indian Political Science Association have both interested themselves in special studies of Public Enterprises in India. The study of comparative economic systems is again a branch common to both Economics and Politics. The two sciences are, therefore, intimately related and it is somewhat difficult to draw a clear line of demarcation between them.

### 3. ECONOMICS AND SOCIOLOGY

Sociology is the mother-science. Other social sciences like Economics, Political Science, Ethics *etc.* have been derived from it. The relationship

between Sociology and Economics is that of a mother to her daughter. Sociology studies all the aspects of human life—social, religious. economic and political. It is an all-comprehensive science. Economics studies only one particular aspect of human life, namely, the economic aspect *i. e.* how a man earns his income and how he spends it. As pointed out earlier, Economics does not directly study the non-economic aspects, although it cannot ignore or neglect them for a proper understanding of the economic motive. Economics thus becomes a branch of Sociology. As already indicated, Comte argued against the separate existence of Economics. He wanted it to merge completely in Sociology. But, as we have already seen, merging completely the separate indentity of Economics into Sociology would not be a desirable course of action. It would hinder and impede the growth of Economics. Besides, it would lead to confusion and chaos. Economics can flourish only by maintaining its separate indentity. Then there are some economists (and Marshall is one of them) who are opposed to Sociology being developed as a single, comprehensive science because, as Marshall has remarked, "the whole range of a man's action in society is too wide and too various to be analysed and explained by a single intellectual effort." It is perhaps this reason which stands in the way of the progress of Sociology. It is an admitted fact that Sociology has not been able to make as much progress as other social sciences. Nevertheless, the economists do draw upon the experiences of

the sociologists for the development and growth of Economic Science. For example, the sociologist can render useful assistance to the economist when the latter is engaged in a study of the socio-economic conditions of the tribal and backward people. The sociologist, in his turn, can seek useful guidance from the economist in his researches and investigations.

## 4. ECONOMICS AND PSYCHOLOGY

Economics and Psychology are again *intimately related to each other. In fact, economists have been drawing heavily upon materials furnished by Psychology in the past for raising the structure of Economics itself. There is hardly any significant law of Economics which is not based or built upon psychological foundations.* J. S. Mill was so much impressed by the heavy debt that Economics owed to Psychology that he even went to the extent of dubbing Economics a "moral or psychological science."[5] Jevons made his doctrine of utility rest explicitly upon Bentham's psychology of pleasure and pain. He made Economics even more psychological than Mill had done. To Jevons, the theory of Economics was the "mechanics of utility and self-interest" and "based entirely on a calculus of pleasure and pain,"[6] We may not go as far as Mill and Jevons had gone. but there is certainly no denying the fact that Economics owes a heavy

5. J. S. Mill : *Unsettled Questions of Political Economy*, p. 129.

6. Jevons : *Theory of Political Economy*, p. 23.

debt of gratitude to Psychology. In fact, too much emphasis laid by Jevons on the utilitarian aspect of economic theory disturbed the equanimity of certain economists, who thought that if they accepted *in toto* Jevon's utilitarian doctrines, they would expose themselves to the charge of being hedonists.[7] So keen were they to be acquitted of this charge that they thought of dispensing with the psychological foundations of Economics altogether. Economists like Irving Fisher and Herbert J Davenport expressly repudiated hedonism and professed to dispense with the psychological foundations by making Economics, "the science that treats phenomena from the standpoint of price." Alfred Marshall also sought to clear his writings of any element of hedonism by substituting the word "satisfaction" for the word "pleasure." But by so doing the psychological foundations of Economic Analysis could not be knocked out in actual practice. Economics, as Professor Robbins says is "the science of human behaviour as a relationship between ends and scarce means, which have alternative uses." Note the emphasis on human behaviour. If Economics is the science of human behaviour, then surely the economist must have a working knowledge of how

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7. A Hedonist is one who is devoted to pleasure. Aristippus, an ancient Greek Philosopher, was the founder of Hedonism. His philosophy was that pleasure was the ultimate end of life. Hedonism was looked down upon in certain circles even in those days. Fisher and Davenport did not like the economists to be associated with this philosophy of Hedonism.

human beings behave; how they feel, think and act; how they would deal with each other in earning a living; how they would behave with each other in the market. The economist, therefore, has to be a little of psychologist too, if he is to perform his functions adequately and well.

We could furnish several instances of economic generalisations based wholly or partly on psychological foundations. Accepting Professor Robbins' definition of Economics, the really economic problem is the problem of scarcity-the scarcity of means in relation to multiple ends. This naturally raises the question of choice; to which particular ends are the scarce means to be put. A person having a limited sum of money in his pocket has to decide the things or items on which he is going to spend it. A choice is involved. It is a difficult choice, no doubt. But it is a choice which involves the use of the psychological element. The person concerned shall have to weigh in his mind the utilities that he shall derive from the alternative schemes of expenditure. Is this choice not an exercise in Psychology? Thus the law of choice, which is the most fundamental law of Economics, has a psychological foundation. Gossen's First Law, popularly known as the Law of Diminishing Marginal Utility, has a distinct psychological bias. The utility that the consumer derives from the consumption of a commodity is a purely psychological phenomena. As the consumer gets additional units of the

commodity, his desire or want gets satisfied and the utility goes on diminishing with every successive increment of the commodity. Gossen's Second Law, popularly known as the Law of Substitution or the Law of Equimarginal Utility is again built up on psychological foundations. If the consumer wants to maximise his satisfaction he should so distribute his money on the various uses that the marginal utility in each case is the same. Now equalising the various marginal utilities is a purely psychological process which most of us have to undergo if we want to maximise our satisfactions. Dr. Marshall's concept of the consumer's surplus is again a concept which is psychological in nature. In the Theory of Production, we have certain fields where the two sciences penetrate each other. We refer, for example, to the field of Industrial Relations, where the economists and the psychologists have equally valuable contributions to make. Another field may be that of scientific management of industry. In the Theory of Exchange and Price-determination, the psychological element is perhaps the most prominent. The determination of prices, in the ultimate analysis, is influenced *inter alia* by what the poeple think is going to happen to prices in the future. In the Theory of Distribution, the recent concept of liquidity-preference which, according to Keynes, influences the rate of interest, is, in our view, a psychological concept. In Monetary Economics, the velocity of circulation of money which is one of the constituents of the Quantity Theory of

Money has a distinct psychological basis. We have now adduced perhaps enough evidence to show the close and intimate relation between the two sciences. In the face of all this, it is, as Professor Mitchell puts it, 'naive to talk of divorcing Psychology from Economics"[8]. Professor Henry Higgs aptly remarks, "that Psychology must be to Political Economy like the deity of Boethius—a path, motive, guide, original and end"[9].

While the economist makes so much use of Psychology in his researches and investigations, it should not be construed that he seeks to explain and analyse psychological concepts. Nor does he seek to establish them. That is the function of the psychologist. The economist does not question the validity of the psychological concepts. He accepts them as they are and seeks to build upon them. Professor W. B. Mitchell was, however, not content with this position. According to him, the economist should not remain satisfied with borrowing psychological notions from the psychologists. If Economics is to deal with human behaviour, then the economist must go beyond the contributions made by the psychologists and forge his own psychological tools for the development of the Economic Science. We, however, find ourselves unable to accept Professor Mitchell's view because that would amount to intrusion in others'

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8. W. B. Mitchell : The Prospects of Economics, published in the *Trend of Economics*, ed. by R. G. Tugwell, pp. 16-17.

9. See "Political Economy and Psychology" in *Palgrave's Dictionary of Political Economy*, 2nd edition, Vol. III, p. 14.

territories, besides hindering the development of Economics itself.

## 5. ECONOMICS AND ETHICS

Since both of them are branches of Sociology, they are closely related to each other. The question of relationship between the two has been thrashed out in Chapter II, Section 4, under the sub-heading "Economics-Positive and Normative." As we have learnt there, it is a highly controversial question which does not admit of an easy or straight answer. Professor Robbins has denied the existence of any relationship between the two sciences. He observes, "Economics deals with ascertainable facts ; Ethics with valuations and obligations. The two fields of inquiry are not on the same plane of discourse." Economics does not discuss, according to him, the desirability or otherwise of ends. The study of ends lies outside the sphere of Economics. It is the job of the philosopher to study ends. The economist is concerned with the study of means and how they are adjusted to the multiple ends. Professor George J. Stigler has in recent years reaffirmed Robbins' view and assigned, as he puts it, "an austere role to Economics." He further says, "The philosopher, and not the economist, attempts to decide whether a consumer *should* prefer recitals of the modern dance to spiked beer. Strictly speaking, words like *ought* and *bad* cannot occur in economic discussions"[10]. His reason for keeping Economics

10. G. J. Stigler : *The Theory of Price*, p. 15, (1949).

and Ethics separate from each other is "that if value judgments were mixed up with logic and observation, a science would make little progress. Disputes over undemonstrable value judgments would colour disputes over demonstrable facts or relationships"[11]. This is no new argument. It was also advanced by the Neo-classicists. We fail to understand how the progress of the science of Economics would be impeded if we are careful enough to distinguish our positive conclusions from our normative statements. So long as our positive statements are explicitly distinguished from our normative statements, no harm need be done to the progress of Economics. But it is clearly impossible for us to accept the view that Economics and Ethics should be segregated from each other.

Today, there is a consensus of opinion among leading economists that there should be no high walls between the two sciences. As Professor Cairncross remarks, "Not only do ethical problems lead on to economic problems; the reverse is also true. It is hard to keep a discussion of any economic problem free from moral judgments of right and wrong.........In the problems of the real world, moral and economic issues are hopelessly tangled up. We can unravel the threads, calling this moral and that economic. But in the answer to the problem, they must be woven together. However reluctant economists may be to introduce the

11. *Ibid.*, p. II.

brittle thread of Ethics (so often snapped by disagreement) into their analysis, they cannot offer the guidance which is so urgently sought of them unless they do They can explain how the economic system works without putting the mantle of philosophy over the rather drab working clothes of economic science. But they cannot say how the system can be made to work better. They can offer light, but not fruit ; and it is fruit for which most people turn to Economics. Immediately, the economist does venture to offer counsel as is expected of him he appears in the role of sheep in wolf's clothing ; economist turned philosopher. This is a role which he must play consciously, not sheepishly, as if there were no wolf's clothing there, if his conclusions are to command attention and respect [12]. We need offer no apology for this lengthy extract from Cairncross. It expressess in an inimitable style the actual position of Economics *vis-a-vis* Ethics. Prof. Alec L. Macfie reaches a similar conclusion when he remarks, "Modern life is demonstrating, what specialisation tends to obscure that the economic and the ethical are not two separate departments in life, but rather two aspects of the same life, or one aspect at different stages.[13] Professor Seligman aptly remarks, "Economics, like Ethics, is primarily a social science ; the true economic action must, in the

12. Cairncross, A. : *Introduction to Economics* (1944), p. 9.
13. Alec L. Macfie : *An Essay on Economy and Value* (1936), Preface, p. (vii).

long run, be an ethical action".[14] Prof. R. G. Tugwell has no hesitation in saying "Economics is ethical, inescapably and rightly so"[15]. These are words of truth and wisdom. There is much force in what these celebrated economists have to say about the relationship between the two sciences. In fact, Ethics furnishes ideals which Economics tries to approximate or realise. Economic activities should and must be influenced by ethical considerations. What is morally unjust could not be considered economically right. Whether it is consumption, production, exchange or distribution of wealth, ethical considerations could never be excluded or ignored. So long as Economics maintains its contact with Ethics, there is hope for mankind. The moment this connection is snapped, there would be nothing but gloom and misery all around.

While Economics is so much indebted to Ethics, Ethics too, in its turn, is beholden to Economics. Economics builds and reinforces Ethics. Economics provides materials on the basis of which Ethics can draw its own conclusions. For instance, Economics furnishes statistics of liquor consumption on the basis of which Ethics can build up a powerful case for Prohibition. Economics can reveal the extent of black-marketing; Ethics can plead for action for its eradication. Economics can disclose "sweated trades;" Ethics can urge for their

14. R. A. Seligman : *Principles of Economics*, p. 35.
15. R. G. Tugwell : *Trend of Economics*, p. 419.

suppression. Ethics thus looks to Economics and Economics looks, in its turn, to Ethics. The two are, therefore, inseparables

## 6. ECONOMICS AND MATHEMATICS

The two sciences are basically related to each other. The use of Mathematics, it must be admitted, is implicit in the Economic Science. As we have already seen, Economics is basically concerned with the problem of choice in view of the scarcity of means in relation to ends. A choice always involves comparison of utilities of the various alternatives. This, of course, is not possible without mathematical calculations. Economic decisions, thus, whether of the individuals or of the corporate bodies are only reached with the aid of Mathematics.

Several well-known economists of the past have been powerful champions of the use of mathematical methods in Economics. Among them we may mention Jevons, Menger, Walras, Cournot Wicksteed, and Edgeworth. Dr. Marshall, though himself a mathematical economist, was yet different from these economists. He was somewhat conservative in his attitude to the use of mathematical methods. "A training in mathematics", in his view, "is helpful by giving command over a marvellously terse and exact language for expressing clearly some general relations and some short process of economic reasoning."[16] But he tries

Appendix D, p. 781.

to avoid it as far as possible when writing for the general reader. He remarks, "One should use mathematical formulae as an abbreviated language, not as a means of research; but as soon as one has attained the expected results, one should translate the mathematical formulae into ordinary language and then burn them."[17] Professor Francis Edgeworth, a contemporary of Marshall, was, however, an uncompromising champion of mathematical modes of thought and he even deplored the fact that most of the economists were ignorant of them. He remarks, "Mathematics is as it were the universal language of the physical sciences. It is for the physicists what Latin used to be for scholars but it is unfortunately Greek to many economists........The parsimony of symbols, which is often an elegance in the physicist, is a necessity for the economist." Between these two extremes ( Marshall and Edgeworth ) there stand other adherents of the use of mathematical method in economic investigations and discussions. The most successful of them are A. C. Pigou, J. M. Keynes, and A. L. Bowley.

The use of mathematical methods in Economics can be discussed broadly under two heads—the *algebraic* and the *diagrammatic*. The use of the former involves higher mathematics including infinitesimal calculus and can be understood only by those who have had some grounding in mathe-

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17. See *Memorials of Alfred Marshall*, ed by A. C. Pigou (1925), p. 427.

matics The use of the latter method, however, is very simple and can be used even by those who have had only an elementary knowledge of the first principles of geometry. Frequently, the algebraic and the diagrammatic methods are combined together. Some of the standard works on Economics, such as E. H. Chamberlin's *Theory of Monopolistic Competition* or Mrs. Joan Robinson's *The Economics of Imperfect Competition* or Kenneth E. Boulding's *Economic Analysis* combine both the methods. To these two, a third, namely, the *arithmatical method* may also be added. But this method is used only to facilitate students' understanding of some complex economic theorems. It may be used for the purpose of illustration only. As regards the use of the mathematical method, there is hardly any branch of Economic Analysis which is not being treated mathematically these days. Whether it is the theory of consumption, or the theory of value, or the theory of distribution, or international trade, or the modern theory of employment, none of them is to-day immune from mathematical treatment. As a matter of fact, even new mathematical devices have been discovered to tackle some of the complex problems of Economic Analysis. To have an idea of this, the reader is referred to the new work of Professor R. G. D. Allen entitled *Mathematical Economics* published in 1956. Gone are the days when the economists used to relegate their mathematical equations to the Appendices in their works on Economic Theory. Marshall, for instance, found it prudent to place his equations in a small Appen-

dix towards the end of his *Principles*, and called it Mathematical Appendix. The economists are today veering round Vilfredo Pareto and Leon Walras, who boldly put their equations in the body of the text. These economists of the Lausane School went so far as to represent the functioning of the entire economy in terms of an interdependent set of mathematical propositions. Such an analysis is referred to as *General Equilibrium Analysis.*[18] A. A. Cournot who published in 1838 his well known, "*Researches into the Mathematical Principles of the Theory of Wealth*" became sorely disappointed when his work failed to evoke any popular appeal. Today, the same "discarded master-piece" of Cournot has become the source of inspiration for the economists.

The use of Mathematics in economic discussions and investigations brings in its wake several substantial advantages to the economists. Mathematics, as we know, provides us with the most effective method of reasoning since Mathematics is itself a branch of logic. The use of mathematical symbols and diagrams renders the task of exposi-

18. As opposed to this, Marshall's analysis may be called *Partial Equilibrium Analysis*, because his mathematical method aimed "at throwing a bright light on some small part of the great economic movement rather than at representing its endless complexities" (*Ibid.*, p. 313). It may, however, be said that the General Equilibrium Analysis of Pareto and Walras sacrifices simplicity at the altar of completeness. Marshall's Partial Equilibrium Analysis is much more simple, although it lacks completeness.

tion much easier. The economist can present the most complex and abstract theorems with ease and comfort. The use of graphs is particularly valuable for illustrative purposes. Then there are certain complicated economic problems which cannot be treated except in mathematical terms. The use of Mathematics in Economics also brings about accuracy and precision in thought and expression. And there is no greater safeguard against the mis-application of theory than its precise expression which is possible only when it is treated in mathematical terms. The employment of the mathematical method also increases the economists' power of treating variables as variables and not as constants as economists are generally prone to do. The difficulty is that the economistsare confronted with so many factors that they cannot treat all of them simultaneously. So they have to regard some factors as constants for the purpose of analysis. But if they use the mathematical method, the number of constants can be reduced to the barest minimum and the results can be more realistic and accurate. Professor Edgeworth observes that "to treat variables as constants is the characteristic vice of the unmathematical economists. To treat them as constants may indeed be necessary for purposes of simplification, if we are limited to the comparatively clumsy instrument afforded by ordinary language. It is, however, clear that under such conditions the solution obtained cannot be regarded as more than a first approximation." Mathematics also enables us to economise the use

of words. Sometimes even very lengthy arguments can be briefly expressed in symbols. A single diagram or a concise formula can serve to make a problem more intelligible than the use of lengthy and involved arguments. For example, Fisher's Equation of the Quantity Theory of Money makes the various inter-relationships intelligible to the readers even with a single glance. In its absence, lengthy and involved arguments about monetary relationships would make confusion worse confounded. Still another advantage of mathematical analysis is that it enables us to understand the mutual inter-dependence of the various types of economic phenomena. The diagram explaining price-determination makes explicit to us the mutual dependence of price, demand and supply. Finally, as Professor R. G. D. Allen asserts, the use of Mathematics is conducive to greater efficiency in economic analysis. We cannot resist the temptation of quoting him on this point when he remarks, "It is only a matter of efficiency as when a contractor decides to use mechanical earth-moving equipment rather than picks and shovels. It is often simpler to use picks and shovels, and always conceivable that they will do any job ; but equally the steam shovel is often the economic proposition. Mathematics is the steam shovel of logical argument. The point is that economic facts are extraordinarily complicated, so that the steam shovel of mathematics is to be expected to be the most efficient way of delving into them. To maximise the relation of theory to fact, to minimise the simplification

away from reality, it is usually safer to operate in mathematical terms."[19] Further, tendering advice to the economist, Professor Allen remarks, "An economist who ventures to set up a theoretical model of empirical content is well-advised to do so in explicit mathematical form. He risks failure if he does not; or at least, he is liable to overlook some cases or possibilities which may be important, and to make empirical testing of his model more difficult.[20] The various advantages that we have been discussing above can be well-expressed in the words of that great mathematical economist of the 19th century, A. A. Cournot when he observes that "it (mathematics) can facilitate the exposition ; make it more concise ; put it on the way towards more extended developments, and prevent digressions of vague argumentation."[21]

So great are the advantages of the use of Mathematics in Economics that in recent years a new branch *viz.* Mathematical Economics has come into vogue. Mathematical Economics consists of a set of economic propositions and arguments presented with the aid of mathematical symbols. Reference has already been made to Professor R. G. D. Allen's *Mathematical Economics* (1956), a monumental work on this new branch. In France and Italy, as a result of the

19. R. G. D. Allen : *Mathematical Economics* (1956), Macmillan & Co., London, p. xvi (preface).

20. *Ibid.*

21. A. A. Cournot : *Principes Mathematiques*, p. viii.

works of Maffeo Pantaleoni and Vilfredo Pareto, the mathematical method is to-day the chief instrument of scientific development and thought. We quite agree with Oskar Morgenstern when he says that in the future an increasing use of Mathematics for purposes of both deduction and induction may be confidently expected"[22]. We may go a little further than Oskar Morgenstern. In another two or three decades, Economics may become so highly mathematical that it would virtually be a 'closed book' for those, who have had no training in higher Mathematics.

## 7. ECONOMICS AND STATISTICS

The two sciences are very intimately related to each other to-day. There was a time when Statistics was known as the Science of Kings. It is no longer the case now. To-day, Statistics has penetrated into almost every branch of human knowledge[23]. In Economics, however, Statistics enjoys a special status. In fact, the continued existence of Economics today would be impossible without the support of Statistics.

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22. See *Encyclopaedia of Social Sciences*, Vol. V, p. 368.

23. H. Secrist provides us with a very comprehensive definition of Statistics which runs as follows: Statistics mean "aggregates of facts, affected to a marked extent by a multiplicity of causes, numerically expressed, enumerated or estimated according to reasonable standards of accuracy, collected in a systematic manner for a pre-determined purpose, and placed in relation to each other." (*An Introduction to Statistical Methods*, p. 10).

There was a time when the economists were not favourably inclined to the use of Statistics in economic researches and investigations. The classical economists, for example, who were wedded to deductive method of reasoning, had only a lip-sympathy for Statistics. It was W. S. Jevons (1835-1882) who in his *Theory of Political Economy* made a strong plea for the use of Statistics by economists for confirming the conclusions arrived at by a process of deductive reasoning. He may be considered a pioneer in the direction of the statistical treatment of economic phenomena. The strongest emphasis on the incorporation of Statistics into Economics, however, came from the Historical School of Germany. The three prominent leaders of this School, Roscher, Knies and Hildebrand were staunch supporters of the use of statistical induction for the explanation and illustration of economic theorems, nay, even for the formulation of such theorems. Dr. Marshall had also a soft corner for statistical studies. Giving evidence before the Committee of Census in Great Britain, Marshall aptly remarked, "Statistics are the straw out of which I, like every other economist, have to make bricks." Pareto and Edgeworth were two other economists of eminence who pressed with great vigour the use of statistical methods in economic investigations. Towards the close of the 19th century, the relation between Economics and Statistics grew still more intimate for two reasons Firstly, the science of Statistics itself had made rapid advances as a result of the painstaking work of

eminent statisticians like Karl Pearson, C. B Davenport, Yule, A. L. Bowley, W. I. King and others. Secondly, by this time, several countries of the world had started collecting, through governmental machinery, a huge mass of statistical data on diverse aspects of rational life. Such data could become the basis for the discovery of new statistical devices and techniques. So, by the beginning of the 20th century, a successful marriage had been performed between Economics and Statistics. The two had, in fact, become inseparables.

We may now see how Statistics can and does serve as an instrument for the growth and development of economic analysis. Statistics performs four distinct services for Economics. *Firstly*, Statistics can serve the basis for economic theorising or the formulation of economic theorems. To use a figurative language, Statistics furnishes the raw materials which are used to forge new economic tools for analysis and investigation. We could give instances of several important economic doctrines built up entirely on the foundations of Statistics. Malthus' Theory of Population is an economic doctrine whose basis was purely historical or contemporary statistics of certain European countries. Engel's Law of Consumption was evolved out of a study of family budgets in Prussia by a Prussian statistician, Dr. Ernest Engel. The well-known theory of the Trade Cycle was not worked out deductively but was evolved out of a series of statistical observations spread over a considerable

length of time. *Secondly*, Statistics also enables the economist to check the accuracy of economic theorems evolved as a result of a process of deductive reasoning by undertaking statistical or empirical studies. In this way, the truthfulness or the accuracy of economic doctrines can be established beyond doubt. The law that man always prefers a bigger gain to a smaller one can be submitted to the test of actual experience through statistical induction. It may be that there shall be several exceptions to this law and in actual practice it may not be as true as it sounds on the face of it. The law that man always buys in the cheapest market may also be found on a statistical check-up to be accompanied by several exceptions. Likewise, the law that labour always moves from a worse-paid to a better-paid region may not be true in all cases. We can thus be sure of the veracity or otherwise of deductive doctrines by submitting them to the test of statistical experience. Professor Colin Clark, a staunch advocate of the use of statistical methods in Economics, deplores the tendency of some present-day economists to belittle or ignore the importance of Statistics in the solution of economic problems. He remarks, "It would be laughable, were it not tragic, to watch the stream of books and articles attempting to solve exceptionally complex problems of present-day economics by theoretical arguments, often without even a single reference to the observed facts of the situation."[24]

24. Colin Clark : *The Conditions of Economic Progress*, (1940), pp. vii-viii.

Further talking of economic theory, he says, "It must be theory which respects facts, not tries to supersede them."[25] The implication being that economic theory should be, as far as possible, realistic, and based upon statistical facts. *Thirdly*, the use of Statistics also becomes indispensable in the settlement of the economic controversies such as Free Trade *vs.* Protection ; Control *vs* Decontrol ; Nationalisation *vs.* Private Enterprise. The only way to resolve these controversies is to fall back upon the relevant statistics in the matter. Putting forth accurate, reliable and unbiassed statistics is the only way to silence the uncharitable critics. *Fourthly*, Statistics also constitute the basis for the formulation of correct economic policies. If the available statistics are scanty, unreliable and prejudiced, it is not possible to frame correct policies on their bases. The food policy of the Government of India has not been much of a success because it had been evolved on the basis of highly scanty and not very reliable type of statistical data. The availability of an adequate, reliable and unprejudiced statistical data is, therefore, the first prerequisite for the formulation and successful execution of economic policies.

Lest the reader should misconstrue, it should be emphasized that the relationship between Economics and Statistics is not a one-way traffic. Economics too has served Statistics in its growth and development. It would not be wrong to say

25. *Ibid.*

that Economics has exercised a profound influence on shaping the course and direction of Statistics. Several of the statistical devices and techniques have been evolved out of economic phenomena. It is also significant that several of the leading statisticians had Economics as their first love Next to Mathematics, it may be said, Economics has influenced Statistics most. The two sciences are, therefore, complementary to each other. They act and react upon each other. As Professor R. G. D. Allen says, "The economist gets nowhere without statistical guidance; the statistician has a few stock answers but needs more instruction from an economist than he is usually given."[26]

While there are no two opinions about the utility of Statistics, the economist, it is added, should exercise due care and discrimination in making use of them in his researches and investigations. As it is often said, there are three degrees of comparison in lying: lies, damned lies and Statistics. Statistics are thus considered lies in the superlative. There is no truth in this statement. But it does reflect popular distrust of Statistics. There is, however, nothing wrong with the science of Statistics. It is only some interested people who misuse or even abuse the tools of Statistics to serve their own ends; thereby bringing the whole science in disrepute. Nevertheless, the economist should satisfy himself about the reliabi-

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26. R G. D. Allen: *Mathematical Economics*, p. 695.

lity of statistical data before he makes use of them in his investigations. Taken thus with due precaution and discrimination, the statistical method can lay its claim to rank as the most effective instrument of science. The late Dr. J. N. Keynes has described well the relationship between Economics, Statistics, and Mathematics thus: "Political Economy has a special tendency to become, on its inductive side, statistical just as on its deductive side, it tends to become mathematical."[27]

## 8. ECONOMICS AND ECONOMETRICS

Economics to-day draws so heavily upon Mathematics and Statistics for its sustenance and growth that an altogether separate and distinct science of Econometrics has come into existence. Although it is relatively a new science, yet its roots can easily be detected in the past. Count Pietro Verri (1728--97) may rightly be considered to be the first econometrician of the world. He was an officer in the Austrian administration of Milan and world's first economist to figure out a balance of payments for his country. Several other economists of the past such as Sir William Petty (Britain), Richard Cantillon (France) and the physiocrat Quesnay could also be classed as econometricians, because their works partook more of the character of Econometrics than of Economics. Even the late Dr. Marshall, though not an econometrician him-

27. J. N. Keynes: *Scope and Method of Political Economy*, p. 350.

self, yet could forsee the development of the new science of Econometrics. It is said that he even outlined important parts of the programme of modern Econometrics in his well known address on "The Old Generation of Economists and the New". Irving Fisher, whose Equation of the Quantity Theory of Money is so well-known was essentially an econometrician standing in line with Petty and Quesney. P H. Douglas' *The Theory of Wages* is considered the most courageous adventure in the field of Econometrics. But of all, the name of Henry Ludwell Moore of America shall always be associated with the rise of modern Econometrics. Professor A. L. Bowley is another luminary in the firmament of the nascent science of Econometrics.

But what is Econometrics? Wassily Leontief, himself a renowned econometrician, defines it "as the combination of theoretical and statistical analyses."[28] This definition, however, does not provide an adequate indication of the contents of the new science. Professor Ragnar Frisch, who is credited with having coined this new term[29] does not agree with this definition. While writing the opening editorial in the January 1933 issue of the *Econometrica*,[30] Professor Frisch wrote:

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28. See H. S. Ellis: *A Survey of Contemporary Economics*, p. 388.

29. Professor Frisch, it is said, coined it by analogy with Biometrics, or Statistical Biology. Professor Schumpeter, however, objects to the new term on philological grounds He says it ought to be either *Ecometrics* or *Econometrics*. (See his *History of Economic Analysis*, p. 209).

30. The Econometric Society was organised in 1930 and the first issue of *Econometrica* came out in January, 1933.

"But there are several aspects of the quantitative approach to economics, and no single one of these aspects, taken by itself, should be confounded with econometrics.

Thus econometrics is by no means the same as economic statistics. Nor is it identical with what we call general economic theory although a considerable portion of this theory has a definitely quantitative character. Nor should econometrics be taken as synonymous with the application of mathematics to economics. Experience has shown that each of these three view-points, that of statistics, economic theory and mathematics, is necessary but not by itself sufficient condition for a real understanding of the quantitative relations in modern economic life. *It is the unification of all three that is powerful And it is this unification that constitutes econometrics.*" (Italics ours)

Professor (Harold) T. Davies makes its meaning still more clear when he remarks, "......the newly coined term "econometrics" connotes better than either 'mathematical economics' or 'statistical economics'........it implies that the phenomena of economics are to be investigated through their statistics and such patterns as may be observed are to be described in mathematical terms and by means of mathematical equations."[31] It may thus be said that Econometrics is a blend or fusion of Economic Theory, Statistics and Mathematics, and

31. Harold T. Davies : *The Theory of Econometrics*, p. xi.

as Professor R. F. Harrod observes, "Economic Theory will make good progress to the extent that it can transform itself into Econometrics."[32] It is heartening to know that the new science is now making rapid strides and each year adds something to our knowledge of the behaviour of prices, wages, production and other economic phenomena.

## 9. ECONOMICS AND NATURAL SCIENCES

Economics and the various natural sciences such as Physics and Chemistry are inter-related though the relationship is not no close or intimate as in the case of social sciences. The relationship may not even be obvious at first sight. But it is a fact that Economics and the natural sciences act and react upon one another. New developments in the natural sciences have generally their economic implications too. The Industrial Revolution, marked by several inventions and discoveries, changed altogether Britain's economic structure, nay, the economic structure of the world. The latest discovery of atomic (or nuclear) energy has ushered in a new age for mankind.[33] It may revolutionise the entire world economy. It may have a profound influence on the location of industry and the distribution of populations. It may even render the present highly developed

32. R. F. Harrod : *Towards a Dynamic Economics*, p. 14.

33. For a highly suggestive and stimulating discussion of the probable economic effects of atomic energy, the reader is recommended to read A. J. Brown's *Applied Economics* (1949), George Allen & Unwin Ltd., London, pp. 227-238

industrial techniques obsolete in a few years' time. Modern transport may be revolutionised beyond the range of human thinking. In short, there are immense possibilities of the use of atomic energy for peaceful, constructive purposes. These numerous potential uses of nuclear energy cannot but transform the character of modern Economics.

It is not only the natural sciences which react upon and influence the course of Economics; Economics, too, in its turn, influences scientific developments. The costliness of jute in America has led to the discovery of new substitutes, some of which are not bad substitutes for jute. The non-availability of petroleum in India led to the production of power alcohol from molasses. To meet the scarcity of food, attempts are now being made to produce artificial rice in India. The general shortage of natural rubber during the Second World War led to the production of synthetic rubber in America. In short, Economics is constantly posing problems which the scientists attempt to solve.

Furthermore, Economics is a science which is primarily concerned with the production of material wealth, because human welfare, to a very large extent, depends upon material wealth. As such, Economics has to take cognizance of the numerous physical laws (or laws of physical sciences) which influence the production of material wealth. Economics assumes some of the physical laws as

the basis on which it carries out its reasonings, tracing the influence which they exercise on the production of material wealth. It must, however, be made clear that such laws do not form the subject-matter of Economics itself. Economics studies them only indirectly in so far as they provide the premises or data for its reasoning. Nor is the economist concerned with the explanation or illustration of such laws except when it is necessary for his own investigations. Nevertheless, an economist must possess some elementary knowledge of the various natural sciences such as Physics, Chemistry, Agronomy, Mining *etc.* so that he may not make ridiculous (or ludicurous) statements about the scientific implications of economic phenomena.

Nor is this all. There are some laws in Economics which seem directly to have been derived from the natural sciences. We may give here the example of the Law of Diminishing Returns. It is a law which is more of a physical than of an economic law. Then, again, there are some important economic terms such as Statics and Dynamics which have been borrowed directly from the physical sciences. Some economists are very fond of conveying economic phenomena to the untutored minds by means of mechanical analogies. We are referring to Irving Fisher's classical essay on "*Mathematical Investigations in the Theory of Value and Prices*" published in 1892 wherein he has brought out the economic equivalents of

several mechanical terms. An abbreviation of the table would interest the readers.

| *Mechanics.* | *Economics.* |
|---|---|
| A particle | An individual |
| Space | Commodity Space |
| Force | Marginal utility |
| Work | Disutility |
| Energy | Utility |
| Total work | Total disutility |
| Net energy | Net utility |
| Equilibrium of forces. | Equilibrium of utility. |

As regards the relationship of Economics to Technology, Professor Stigler observes, "Technology and Economics are concerned with the same data, means and ends. But whereas the economist is concerned with the best allocation of scarce means among competing ends, the technologist studies the best means to attain a specific end."[34] Thus the economist may decide the allocation of scarce funds among several competing ends such as railway construction, road-making, industrial housing or irrigation works. But the technologist as a technologist is concerned only with one specific end, say, railway construction and how best to achieve it. And here also, as Professor Cairncross remarks, the economist needs to have "some smattering of technique" if he is to understand the intricacies of technical problems.

34. G. J. Stigler: *The Theory of Price*, p. 15.

# CHAPTER IV

## NATURE OF ECONOMIC GENERALISATIONS

"There exists a human side to the problem which makes it difficult to state precisely the laws of Economics . ........ the erratic element in economic studies finds its origin in the erratic psychology of human beings."

(Harold T. Davis : *The Theory of Econometrics*, p. 1)

### 1. WHAT IS A LAW ?

Economics, as we have already seen, is a science and like other sciences such as Physics and Chemistry, it has its own laws. We shall examine in this Chapter the nature of economic laws or generalisations. But before we do so, it would be essential to know the meaning of the term "law". As Professor Tugwell remarks, "A law is a summary of observed relations, a brief resume of experience, a shorthand symbol which assists in the understanding of a number of related phenomena."[1] In other words, a law is a concise statement of a causal relationship between two sets of phenomena. The various phenomena are closely related to each other. If phenomenon A, for example, occurs, then phenomenon B also follows it as a matter of course. The inference is that phenomenon B is dependent upon phenomenon A or phenomenon B is the effect of phenomenon A. This sort of rela-

1. See R. G. Tugwell : *The Trend of Economics* p. 42.

tionship, when expressed in the form of a precise statement, would naturally assume the form of a scientific law. The statement, then, that if the price rises, demand shall fall down and *vice-versa* becomes a scientific law. The idea then is that the term 'law' should express a precise or definite relationship between two sets of phenomena. As Dr. Marshall says, "The term 'law' means, then, nothing more than the general proposition or statement of tendencies, more or less certain, more or less definite."[2] It should, however, be made clear that the mere establishment of a causal relationship between two sets of phenomena may not suffice to constitute strictly what we may call a 'scientific law' unless we are cautious in the actual statement of the causal relationship. The various phenomena are so inter-mixed and inter-connected with each other that it is somewhat difficult to state precisely the nature of relationship between two different sets of phenomena. For example, there is an obvious causal relationship between cheap money and business expansion in a private-enterprise economy. Whenever the rate of interest falls down, there is a tendency on the part of business men to invest more funds in expanding their businesses *etc.* In fact, cheap-money policy has been considered an antidote for a business slump in a private-enterprise economy. It has been regarded an effective remedy for curing a country of business slump. But the question arises: Has a

2. Marshall's *Principles*, p. 30.

cheap-money policy always led to business expansion? Not always. There have been several cases on record of countries where the volume of business activity did not respond to a cheap-money policy. Why? The answer is that, although money was cheap, the businessmen lacked confidence, and confidence, as we know, is the first prerequisite of business expansion. Hence the statement that cheap money leads to business expansion is not necessarily true. The causal relationship between the two phenomena is not so simple or straight. Several other phenomena can intervene to snap the causal relationship between the two phenomena. It is, therefore, essential to qualify our statement of the nature of causal relationship between two sets of phenomena by attaching a number of assumptions or conditions to it. Failing that, it cannot be regarded strictly a 'scientific law'. It should also be noted that, larger the number of assumptions or conditions attached to a law, the smaller is the possibility of its being exact or universal in its application. In other words, the one essential condition of universality of a law is that it should be the least conditional or hypothetical with the minimum number of conditions or assumptions attached to it. In this respect, the laws of natural sciences are more universal because they are not as hypothetical as the laws of Economics. The laws of Economics, as we shall see, are subject to so many conditions and assumptions that their

exactness or universal application cannot be easily vouchsafed.

## 2. NATURE OF ECONOMIC LAWS.

As we have said, every science must have its laws. Economics too must have its laws. As Dr. Marshall has remarked, "A science progresses by increasing the number and exactness of its laws." So if the science of Economics is to progress, it must have more and more of precise, definite, exact, and reliable laws of its own. But how do we define an economic law ? "Economic laws or statements of economic tendencies," says Dr. Marshall, "are those social laws which relate to branches of conduct in which the strength of the motives chiefly concerned can be measured by a money price"[3]. Several implications follow from this definition. Firstly, economic laws are only statements of tendencies. They are not as exact as the laws of the natural sciences. Secondly, they are branches of social laws. Thirdly, they can be differentiated from social laws in so far as they are concerned with motives which can be measured by money. Social laws may be concerned with motives which cannot be subjected to a money measurement. In this respect, economic laws are more exact, precise and definite than the social laws and as such economic laws are superior to social laws. Let us now distinguish economic laws from other laws.

3. *Ibid.* p. 33.

(a) *Economic Laws and Moral Laws.* A moral law is a law of human conduct about what a man should or should not do as an individual. For instance, "Thou shall not tell a lie" is a moral law. If a person violates a moral law like this, he may not be punished by the government as he would be if he had violated a government law. The society may abhor such a person. But it cannot inflict any physical punishment upon him. Likewise, the breaking of an economic law may not be followed by any physical punishment. For example, an economic law is that a worker should move to a place where the wages are the highest, but if an individual worker does not follow this law, he cannot be subjected to any punishment. In this sense, economic laws are similar to moral laws. There is, however, a slight difference too between a moral law and an economic law. For violating a moral law, a person may be looked down upon by society but for violating an economic law, there need be no public censure or condemnation.

(b) *Economic Laws and Administrative Laws.* An administrative law is enacted by the legislature and enforced by the executive. There is force behind an administrative law and if any one disobeys it, he is at once punished by the government. "No one shall ride a cycle at night without a lamp" is an administrative law and if any one breaks it, he is at one punished by the authorities. An economic law is quite different. There is no legislature which enacts and lays down economic laws, nor is there

any authority which enforces them. "A person shall buy from the cheapest source" is an economic law but it has not been laid down by any legislature and if an individual does not follow this law, there is none to punish him.

(c) *Economic Laws and Physical Laws.* A physical law is a law of natural sciences. Unlike an economic law, a physical law is always more certain, definite and universal. A ball thrown up in the air must always fall to the ground. An economic law, on the other hand, cannot be so certain and definite as a physical law.

To sum up, it can be said that an economic law is not a law in the sense of a moral law nor is it to be interpreted in the same sense as an administrative law. It is only a statement of a principle upon which men tend to act while engaged in the ordinary business of life. Unlike a physical law, an economic law is only a statement of tendency and by its very nature cannot be so exact and certain as a physical law.

## 3. WHY ECONOMIC LAWS NOT SO EXACT ?

It has been said above that an economic law, by its very nature, cannot be so exact and certain as a physical law. An economic law may or may not work out or even if it works, it may not work in the manner that we expect it to work. As a matter of fact, we can never be sure of the working of an economic law. We cannot say with certainty what *must* happen or what consequences must

follow a certain action of the individual. We can only say what is *likely* to happen. For example, the Law of Demand states that if the price of a commodity falls, its demand will rise. But actually this may not be true. A person who buys one seer of milk at -/6/- annas per seer may agree to buy two seers of milk when its price rises to -/8/- per seer. According to the Law of Demand he buys less at -/8/- annas but actually he buys more at the higher price, perhaps because his income has increased meanwhile and he can afford to spend more upon milk. We cannot, thus, say that he must buy less milk at the higher price. Economic laws are thus mere *statements of tendencies.* They are true only under certain conditions and if those conditions are not satisfied the laws do not hold good. It is because of this peculiarity of economic laws that Dr. Marshall compared them with the laws of tides. "The laws of Economics," said Dr. Marshall, "are to be compared with the laws of tides, rather than with the simple and exact laws of gravitation."[4] The laws of gravitation are invariably true and exact. Not so the laws of tides. The laws of tides lay down how under the influence of the sun or the moon there will be a rise or a fall of tides or how there shall be strong tides at full moon. The laws of tides might predict the highest tide at mid-day, but actually the tide may not be the highest at mid-day. It may be prevented by a number of unforeseen circums-

4. Marshall's *Principles*, p. 30.

tances, such as a strong wind or typhoon in the opposite direction. The operation of the laws of tides can thus be checked by any adverse factor. In a similar manner, the laws of Economics can also be rendered inoperative by many unforeseen circumstances. That is why whenever we state any economic law, we invariably qualify its statement by the addition of the phrase *"Other things being equal" (or ceteris paribus).* But other things, we know, are not always equal and as such economic laws are found to be inexact.

Now the question arises why economic laws are comparatively inexact. The answer to this question is that economic laws deal with Man. Man possesses his own will and is free to act in any way he likes. We cannot predict his actions. Then all men are not alike. Each man has his own taste and temperament and is likely to behave in his own way under given conditions. We cannot, therefore, generalise for all men. Normally we expect a person to act under the Law of Substitution and to attempt to secure the maximum satisfaction from his expenditure. But there may be a person who does not care to calculate his utilities from the various commodities and who just spends money without any idea of securing maximum satisfaction. Economic laws, therefore, cannot be true of all men. As Professor Phelps Brown puts it, economic laws "are inexact, because they deal not with a constant, uniform and inert matter but with

"General Equilibrium" has four possible connotations *viz.* "static equilibrium," "dynamic equilibrium", "expectational equilibrium," and "normative equilibrium.

*Static equilibrium*, of course, relates to the equilibrium of a static or stationary economy. What is a stationary economy ? A detailed treatment of this concept has been reserved for an ensuing chapter. But here it suffices to point out that a stationary economy is a sort of closed economy where there is absolutely no incentive for change on the part of any organism, whether it is production or population or any other organism. Population is constant in number as well as in composition. Production is also constant in the sense that the total stock does not change at all, the rates of production and consumption being constant and equal to each other. Professor Boulding offers a mechanical analogy of a static equilibrium in the form "of a ball rolling at a constant speed or, better still, in a forest in equilibrium, where trees sprout, grow, and die but where the composition of the forest as a whole remains unchanged." It is also pointed out that the concept of static equilibrium has hardly any validity in western capitalism. During its long history of two hundred years, western capitalism at no stage exihibited any tendency or trend toward static equilibrium. Some backward economies, on the other hand, like those of India and China in the past showed definite symptoms of stationariness.

The concept of static equilibrium, therefore, is no mere formal concept. It stands realised historically.

As opposed to static, *dynamic equilibrium* relates to a progressive economy, which we should say, is the opposite of a stationary economy. The incentive to change is to be found in all the organisms of the economy. The organisms do undergo changes but the point to be noted is that the various organisms change at the *same* rate (whether in the direction of an increase or decrease). "An economic system might be said to be in dynamic equilibrium if its total stock, including both things and people, changed at a constant rate (per cent. per annum) and if the rates of production and consumption of all items of the stock increased at the same rate." The point, then, to be noted is that the various organisms must change (whether in the upward or the downward direction) and secondly, they must change at a uniform rate. If this meaning of dynamic equilibrium is accepted, then it becomes clear how very artificial and unrealistic this concept becomes. The organisms do change but they need not necessarily change at a *uniform* rate. As such, this concept is of little importance in interpreting economic change because actual society never conforms to it. The concept of static equilibrium, on the other hand, is realistic and a historical possibility. As pointed out above, it has already been realised in the case of some backward and stagnant economies of Asia and Africa. But there is no reason to

expect that any economy shall ever be in dynamic equilibrium.

Professor J. K. Mehta[32] gives us a somewhat different conception of static and dynamic equilibria. Static equilibrium, according to him, is that equilibrium which maintains itself outside the period of time under consideration. If, however, an equilibrium fails to maintain itself outside the period of time under consideration, it is called dynamic equilibrium. Supposing one day is the period of time under consideration. If, then, the equilibrium continues not only on that day but also on the following day, then it constitutes a case of static equilibrium. If, on the other hand, the equilibrium is disturbed after the expiry of the period under consideration, it constitutes a case of dynamic equilibrium. It is evident that the period of time to be considered is of great importance in deciding whether an equilibrium is static or dynamic in nature.

The third variety of equilibrium is *expectational equilibrium* "a condition in which the expectations of the various organisms of society are mutually compatible and are fulfilled". As we know, the various organisms in a capitalist economy proceed on the basis of future expectations of prices. A farmer, while sowing the crop, is influenced and guided by the expected price of the crop. Similarly, a businessman, say, a miller, also proceeds on the

32. J. K. Mehta : *Advanced Economic Theory*, p. 86.

basis of the expected price of corn. Suppose the farmer expects the price of wheat to be Rs. 15/- per maund while the miller expects the price to settle somewhere at Rs. 10/- per maund. Now it is clear that the expectations of both—the farmer and the miller—cannot be realised simultaneously. If the price comes to be Rs. 15/- the farmer would be happy but the miller would be disappointed because his expected price has not been realised. It is impossible that the expectations of both shall be fulfilled. Nor can it be said that the expectations of the two are in any way compatible. So it is very seldom that the expectations of all organisms of society are mutually compatible and are fulfilled simultaneously. Hence the concept of expectational equilibrium is purely of a formal or academic nature. It has hardly any practical bearing. Actually what takes place in the economy is *expectational disequilibrium* rather than *expectational equilibrium*. Disappointment, as it is said, is the symptom of expectational disequilibrium. Whenever some peoples' expectations are not realised and they feel disappointed, that is an indication of expectational disequilibrium. The whole history of capitalism proves that expectational equilibrium has never been attained in the past and it can be vouchsafed for the future also that expectational equilibrium is an impossibility so long as division of labour continues to be a marked feature of a capitalist economy. Expectational disequilibrium arises because the decisions to produce are taken by one set of people while the decisions to consume are

taken by a different set of people. The higher the wall between the two, the greater shall be the possibility of expectational disequilibrium. This expectational disequilibrium is also the cause of a modern capitalist economy's biggest problem *viz.* that of the Trade Cycle. Expectational equilibrium may, thus, be considered more a figment of the economists' imagination than a realistic and a practical concept.

Still another connotation of equilibrium is what is sometimes referred to as *normative equilibrium.* Normative equilibrium refers to the ideal or the best state of affairs. An economy may be in equilibrium and yet it may not be in normative equilibrium in the sense that it does not lead to the ideal state of affairs. There may be a good deal of misery and hardship even though the economy as a whole may be in equilibrium. Equilibrium as such is no guarantee of the non-existence of misery and hardship among the people. Keynes' *under-employment equilibrium*[33] will serve to clear up the point. According to Keynes, an economy may be in equilibrium and yet it may have to face a large volume of unemployment. It is this situation which Keynes refers to as under-employment equilibrium which, we should say, is the negation of a normative equilibrium. A normative equilibrium, on the other hand, shall be realised only

33. For a detailed analysis of this concept, the reader is referred to the author's *An Introduction to Keynesian Economics* (1957), pp. 83-86.

when not a single person in the economy remains unemployed. But is that possible in the context of a capitalist economy? As such, normative equilibrium is more a moral than an economic concept. At least, in a capitalist economy, normative equilibrium seldom coincides with the actual equilibrium.

While discussing the concept of equilibrium, it is desirable to clear up one or two general or popular misunderstandings about the nature and significance of an economic equilibrium. First, it must be made clear that the existence of an equilibrium in an economy is not at all synonymous with the existence of wealth and prosperity. If an economy is in equilibrium, it does not necessarily follow that it would be a rich, prosperous and a wealthy economy. It is possible for an economy to be in equilibrium and yet be the poorest economy in the world. As emphasized earlier, an equilibrium generally takes place relative to the existing conditions. An economy may be extremely backward and undeveloped with infertile, mountainous land, stunted industry, undeveloped transport and yet it may be in equilibrium relative to these conditions. We have already given the example of the extremely backward economies of Asia and Africa which though poor and undeveloped, are yet to be found in equilibrium, even if the equilibrium is a static equilibrium. As against this, an economy may be rich and opulent and yet it may be in disequilibrium. As Professor Boulding says,

"Economic life in nineteenth century China may have been more in equilibrium than the economic life of United States, but the United States was richer and progressing more rapidly in riches"[34]

Another popular misunderstanding which seems to persist because it has been reinforced by the writings of certain neo-classicists like Robbins is that equilibrium stands for justice and fairplay and that it is the negation of exploitation and oppression. The inference is that wherever an equilibrium exists, there is no possibility of exploitation or oppression. As such, it is pointed out that equilibrium is something sacred and sacrosanct and must be worshipped as a demi-god. But, as we know, reasoning of this type is most fallacious and as such unacceptable. An economy may be in equilibrium and yet permit the most ruthless type of exploitation of one group by another. It is well-known that the plantation labour in Assam and West Bengal is being exploited by the tea planters there. The labourers are paid exceedingly low wages with few amenities of life. Wages are low because there is an abundance of labour seeking employment in the plantations. The same is true of the coal-field labour of Bihar. The workers in certain collieries are treated even worse than animals. All this, however, is the result of an equilibrium between the forces of demand and supply. To simplify matters, there is hardly

34. Boulding: *Economic Analysis*, p. 645.

any capitalist economy where exploitation of one type or another; exploitation of workers by employers; exploitation of consumers by monopolists; exploitation of tenants by landlords, does not take place. And yet it would be preposterous to suggest that capitalist economies are not in equilibrium. It must, therefore, be admitted that the existence of an equilibrium is no guarantee or assurance against the existence of exploitation or oppression. It is in the light of this truth that state policy should be formulated with a view to ending the exploitation of one group of people by another. The State must intervene to disturb and destroy undesirable economic equilibria. As Professor Boulding aptly puts it "just as in a garden or a field, man disturbs the ecological equilibrium of nature to his own benefit, ploughing and hoeing, sowing and reaping, so that instead of a forest or a prairie there develop plants which are most useful to him, so man in his corporate and political capacity may disturb the equilibrium of social organisms to his own benefit, weeding out this one, sowing and fertilising that one through the instruments of political and legal action." There could not be a more forceful plea for state intervention than the one made by Boulding. Let not the State be deceived or hoodwinked by the fallacious arguments of those who wish to stage a 'comeback' to *Laissez-faire* under the deceptive cloak of equilibrium.

### 4. WELFARE ANALYSIS

Welfare Economics is today an important

branch of economic analysis ; a branch which is growing in popularity and appeal, and has come to occupy a respectable position in the general body of economic analysis. Today we have what we call a group of "welfare economists" whose pronounced object is to modify classical doctrines with a view to promoting human welfare by removing economic inequality and economic oppression. They have set up 'social welfare' as an attainable goal within the framework of the capitalist system and are committed to using economic theory as a valuable instrument or a potent weapon for promoting material welfare. As against them, there are other economists who are strictly opposed to Economics being made a welfare study. Professor Robbins, as we have seen, wants to deprive Economics of the right to study welfare on the ground that welfare is an "end" in itself and as such Economics should have nothing to do with it. Professor Alec L. Macfie holds a similar view when he remarks, "All those definitions which describe Economics merely by reference, as pertaining to material welfare would tend to pervert the whole nature of economic science." He further remarks, "when we think of welfare, we hardly think on economic rails at all or rather we think of it on many other rails at the same time.[35]

Nevertheless, economists have always been

35. Alec L. Macfie : *An Essay on Economy and Value,* (1936) p. 13

interested in the problems of wealth and welfare. Adam Smith, the father of Economics, even christened his *magnum opus* as *Wealth of Nations.* His lineal successors—J. S. Mill, Alfred Marshall and A. C. Pigou—have likewise concerned themselves with the problems of wealth and welfare. Professor A. C. Pigou, whom we can call the greatest living representative of Welfare Economics, remarks, "The complicated analyses which economists endeavour to carry through are not mere gymnastic. They are instruments for the bettering of human life. The misery and squalor that surround us, the injurious luxury of some wealthy families, the terrible uncertainty overshadowing many families of the poor--these are evils too plain to be ignored. By the knowledge that our science seeks it is possible that they may be restrained. Out of the darkness Light ! To search for it is the task, to find it perhaps the prize, which the 'dismal science of Political Economy" offers to those who face its discipline."[3] In this connection Professor Pigous' following lines are still more significant. "Our impulse is not the philosopher's impulse, knowledge for the sake of knowledge but rather the physiologists's impulse, knowledge for the healing that knowledge may help to bring."[37] In other words, the object of the study of Economics is to help social improvements. If Economics is not to be a welfare science, it shall lose its vitality and

36. A. C. Pigou : *Economics of Welfare.* Preface p. vii.
37. *Ibid.* p. 5.

significance, becoming thereby in the words of Professor Bye, "a dry exercise in dialectics instead of an interesting and important contribution to human improvement"[38] because the ultimate justification for the great mass of scientific knowledge now being collected is its utility in increasing and promoting the welfare of mankind. As it is pointed out, even the natural sciences like Physics and Chemistry are welfare sciences because their ultimate objective is to control the natural forces for the benefit of man. Even Biology and Psychology have distinct welfare contributions to make. Likewise, Economics too should make a positive contribution to promoting human welfare. A science of Economics without welfare interest is, therefore, unthinkable.

As regards the parentage of Welfare Economics, it is generally traced to Bentham's utilitarian Economics. Jeremy Bentham, the utilitarian thinker, laid down the dictum of "the greatest happiness of the greatest number" as the guiding principle of right action. He advocated, in other words, the promotion of the greatest happiness of the greatest number. This very dictum seems to lie at the very root of Welfare Economics. Later, England's social problem which consisted of expanding wealth in the face of poverty-ridden masses, gave a definite shape and mould to Welfare Economics[39]. A

38. R T. Bye : *Some Recent Developments of Economic Theory* in R. G. Tugwell's *Trend of Economics.*

39. Lewis H. Haney : *History of Economic Thought* (1949), p. 871.

tendency arose among certain British economists to deal with this social problem by making Economics an instrument for promoting social welfare. The first British economist to reconstruct Economics on a welfare basis was John A. Hobson (d. 1940) who in his well-known work "*Work and Wealth*" (1914) made a strong plea for utilising Economics as an agency for social improvements. Hobson had been much influenced by Ruskin and Toynbee. He later became a social reformer, actuated by a strong desire to end economic exploitation and oppression. Hobson as an economic theorist had tremendous influence in America. He was soon followed by Henry Clay who found a strong appeal in Welfare Philosophy. His work "*Economics for the General Reader*" came out in 1916. But it was in 1920 that Professor Pigou's monumental work entitled "*Economics of Welfare*" came out. This work marked a turning point in the evolution of Welfare Economics. Despite the passage of years, Professor Pigou's *Economics of Welfare* still remains the most authoritative work on welfare analysis. It is worth noticing that before Pigou the word 'welfare' was little used. Economists mostly used the word 'satisfaction'. Pigou used the word 'welfare' first and also popularised it. Though the earlier writers did make their contributions, the fact, however, remains that the real and definite beginning of Welfare Economics as a distinct branch dates since the publication of Pigou's *Economics of Welfare*. As Professor I. M. D. Little says, "we would prefer

to say that Welfare Economics began with Pigou. Before that we had Happiness Economics and, before that, Wealth Economics."[40] Professor Pigou defines economic welfare as that part of total welfare which "can be brought directly or indirectly into relation with the measuring rod of money."[41] So it is not difficult to separate economic welfare from total welfare. He further regards economic welfare as consisting in the sum of individual welfares which in turn depend upon a balance between individual satisfactions and dissatisfactions. Further, to Pigou goes the credit of assimilating the phenomena of social costs with economic analysis in his *Economics of Welfare* The term 'social costs' as defined by Kapp, "covers all direct and indirect losses suffered by third persons or the general public as a result of private economic activities."[42] Professor Pigou duly considers the implications or bearings of social costs for human welfare.

In recent years, a controversy has arisen as to whether Economics of Welfare should be a positive or a normative study. It is an offshoot of the general controversy whether Economics as a whole should be a positive or a normative study. Professor A. Radomysler says, "As the Economics of Welfare is concerned with the causes of welfare, it follows that it is a positive study, and not a

40. I. M. D. Little: *A Critique of Welfare Economics* (1950), p 81.
41 Pigou: *Economics of Welfare*, p. 11.
42. K. William Kapp-*The Social Costs of Private Enterprise*, (1950) p. 13.

normative study of what ought to be"[43]. According to him, even Professor Pigou in his *Economics of Welfare*, does not prescribe ; he examines what would increase economic welfare and leaves it at that. It is difficult to reconcile ourselves with this viewpoint. We should not take shelter behind what Professor Pigou says or does. We should rather face the realities of the situation. Would we not make ourselves the laughing stock of the world if we explored the causes of economic welfare, but refused to prescribe the means for promoting it. Exploration of the causes of welfare and the prescription of means are not, in our opinion, two different things. The former only prepares for the latter. If we accept the former and reject the latter we shall be, as economists, abdicating our responsibilities to the charlatan and the quack. We, therefore, find ourselves unable to accept Professor Radomysler's viewpoint. We, however, wholly agree with Professor I. M. D. Little when he says: "Getting rid of value judgments would be throwing the baby away with the bathwater. The subject is one about which nothing interesting can be said without value judgments, for the reason that we take a moral interest in welfare and happiness."[44] At another place, Professor Little is more specific when he remarks: "I have taken the view that the essential purpose of welfare economics is to prescribe, and that, therefore, certain questions of

43. A Radomysler: "*Welfare Economics and Economic Policy*," in *Economica*, August, 1946, p 199.
44. I, M. D. Little-*A Critique of Welfare Economics*, p. 82

value are begged unless it is explicitly based on value judgments."[45]

In recent years, Professor Tibor Scitovosky has made an outstanding contribution to Welfare Economics. In his latest work entitled "*Welfare And Competition*" (1952) Professor Scitovosky has sought to bring together price theory and welfare economics, and discusses the welfare implications of free competition. Even Professor Scitovosky emphasizes the *prescriptive* role of welfare economics when he says: "The task is to study economic organisation, to appraise its efficiency and to suggest ways and means whereby its imperfections can be lessened or eliminated."[46] Interpreted broadly, even Keynes and the Keynesians should be classed as welfare economists. As is well-known, Keynes' greatest contribution to economic thought is his theory of employment—a theory which not only analyses the causes of unemployment, but also prescribes ways and means for securing full employment. Now nothing could be more conducive to economic welfare than the promotion of full employment in society. Full employment has emerged the single dominating economic objective from the Keynesian theory and assumed an importance similar to that of the maximum accumulation of wealth in the vision of the classical economists.

Now before we end this section, we would do

45. *Ibid*, p. 268.
46. T. Scitovosky: *Welfare and Competition*, p. 4

# CHAPTER VI

## METHODOLOGY OF ECONOMICS (I) DEDUCTION *VS* INDUCTION

"These, then, are the two methods: On the one hand, deduction from psychological motives-first and foremost, deduction from the motive of individual advantage, then from other motives; on the other hand, induction from history, from statistics and from the less exact and less certain, yet indispensable, process of common observation and experience. Which method is most to be used depends upon the nature of the particular problem, but it depends also on the turn of mind, very likely on the accident of training and education of the individual investigator."

(Wagner in the *Quarterly Journal of Economics*, Vol. I. p. 124).

"As a matter of fact, it is only by the unprejudiced combination of the two methods that any complete development of economic science is possible"

J. N. Keynes: *SCOPE AND METHOD OF POLITICAL ECONOMY*, p 172.

Every science follows certain methods for the formulation of its laws, principles and theorems. Since Economics is a science, it also adopts certain methods for the dicovery of its laws and principles. In fact, there are some writers who recognise the claim of Economics to be considered a science on the specific ground that it makes use of scientific methods in the forging of its theoretical tools and weapons. Now what is a method? Method means the logical process used in discovering or in demons-

induction. The reader might be warned that the division of opinion between the two schools was not so complete or clear-cut as perhaps these lines might convey. Several classical economists including Robert Thomas Malthus, J. S. Mill and Nassau Senior, although staunch supporters of the deductive method, did not hesitate to resort to empirical analysis. In fact, some of them did a lot of factual research to test or verify their theoretical conclusions. Likewise, there was no complete unanimity in the ranks of the Historical School. While Professor Roscher and Dr. Ingram were the extremists and would not touch deduction even with a pair of tongs, there were others like Von Thunen and Wagner who did not hesitate to use even highly abstract methods in their treatment. They openly admitted the necessity of employing other methods in conjunction with the inductive method. Despite these exceptional cases, the controversy went unabated till Marshall, the great compromising genius, cried halt to it towards the close of the century by holding that instead of being considered rivals or competitors, the two methods should be regarded as complementary to each other. He approvingly quoted Schmoller as saying that, "Induction and deduction are both needed for scientific thought as the right foot and the left foot are both needed for walking."[2] Since then, as has been pointed out above, the controversy has been shelved, although not yet finally resolved. In

2. Marshall : *Principles*, p. 29.

countries like France and Italy, however, there was no such methodological controversy because there the influence of the Classical School was too deep-rooted to be displaced by the thunderings of the Historical School.

## 1. THE DEDUCTIVE METHOD

The deductive method (also known as the analytical, abstract and *a priori* method) was, as pointed out above, strongly advocated and also made use of by economists belonging to the Classical School. It may be described as the technique of an abstract approach to the problems of Economic Science. As already pointed out, in deduction we start from a few indisputable facts about human nature and deduce or draw inferences from them about concrete individual cases. For example, the law that the utility derived by an individual from a commodity goes on diminishing with every successive increment of it is a self-evident truth, hardly requiring any evidence to support it. From this self-evident law, we can easily derive subsidiary theorems as a result of a process of deductive reasoning which may run on somewhat the following lines: The law says, larger the stock of a commodity, the lower shall be the utility derived from it. The larger the stock of money with a person, the lower is the utility that he derives from it. The inference here is that richer people derive a smaller amount of utility from a fixed stock of money than the poorer people. A rupee does not have the same utility for a millionaire as it has for a pauper. A millionaire,

if he happens to drop a rupee coin in the gutter, would not even care to stop and to extricate it. A pauper, on the other hand, would not rest content unless he succeeds in getting back the lost coin. The difference in utility here is the direct result of the operation of the law of diminishing utility. If this inference of the law is accepted and there is no reason why it should not be accepted, then the second inference which flows directly from the first one is that taxation must not be levied on a proportional basis. If taxes are levied on a proportional basis *i. e.* everyone paying a fixed percentage of the income, then the rich go comparatively light-taxed while the poor have to bear a comparatively heavier burden of the tax. Obviously, the two shall be making unequal sacrifices in bearing the burden of taxation. This is unjust and contrary to the canon of equity which is an important canon of taxation. As such, taxation must not be proportional but levied on a clear basis of progression *i. e.* the higher the incomes, the higher should be the rate of the tax. It is evident thus that the principle of progressive taxation has been directly derived from the law of diminishing utility as a result of deductive reasoning. The same can be said of the law of demand. The larger the stock of a commodity, the smaller shall be the utility derived from it. Hence if a purchaser is to be prevailed upon to purchase in bulk, the price must correspondingly be reduced because the larger stock that the purchaser buys correspondingly lowers his utility. So the consumers demand a larger supply of the

commodity only at a lower price. And, again, this law of diminishing utility also forms the basis for the socialist theory of wealth-redistribution. The socialists advocate that there should be some transfer of wealth from the richer classes to the poorer classes because when this wealth comes into the hands of poorer classes, it shall have greater utility than it had in the hands of richer classes This is again a deduction from the law of diminishing utility which states that money had greater utility for poorer persons than for richer ones. Viewed from this angle, the total economic welfare of the community shall increase if a re-distribution of wealth takes place. We thus see how a number of subsidiary theorems can be derived as a result of deductive reasoning from a principle, law or a theorem. It should, however, be remembered that the deductive method is not exclusively a deductive method. It is often aided and even controlled by induction. So a rigid separation of the two is out of question. As it is pointed out, a complete form of a deductive method involves three stages: (i) The first stage comprises of observation to choose and select the premises from which the conclusions are to be derived. (ii) The second stage comprises strictly of the purely deductive stage where as a result of the process of deductive reasoning inferences are drawn from the original premises selected. (iii) The third stage again involves observation in order to illustrate, test and confirm the deductive inferences. The use of observation at this stage enables the investi-

gator to test his conclusions against the background of reality and if he comes across any discrepancy between the two, he can take steps to remove it. In the preceding examples of deductive inferences from the law of diminishing utility, they can be accepted only if they are confirmed by the use of the method of observation. Thus we would see that the process of deductive reasoning cannot be wholly segregated from the alternative process of induction and observation.

Furthermore, it would be helpful, in applying the method of deductive reasoning, to start from very simple premises and to work up gradually to more and more complex hypotheses. The problem should be stated in the simplest conceivable form and then it should be grappled with under less and less simple forms. The actual world, as we know, is very complex and complicated—almost unbearably complex and complicated. If we treat the actual world as it is in its complex form, we will get nowhere. We may have to throw up our hands in despair and confess failure. But if we reduce the complex world to its simplest form and begin from there, gradually introducing more and more complications as we proceed, we shall finally succeed in treating the reality itself. A classic example of such a method is Mill's working out of the theory of international trade. The phenomenon of international trade, as we know, is extremely complex, easily amenable to treatment.

As is well-known, Mill proceeds from very simple assumptions and, as he goes further, he introduces more and more complications in his analysis till he presents us with a complete explanation of international trade. He starts with two commodities and two countries only and ultimately works his way upto several commodities and several countries subject to all sorts of conditions. This method which Boulding calls *the method of intellectual experiment*[3] is similar in several ways to the method of pure mathematics. In mathematics too, we start with some very simple proposition and as we proceed further, introduce more and more complications in our treatment. Further, as Professor Boulding says, though we try to approximate our analysis to reality, it may not be a perfect picture of reality It may only be a 'map' of it. "Just as we do not expect a map to show every tree, every house, and every blade of grass in a landscape, so we should not expect economic analysis to take into account every detail and quirk of real economic behaviour."[4]

The deductive method enjoys several advantages which cannot be ignored in any evaluation of economic methodology. *Firstly*, it must be conceded that the use of deduction is an exceedingly simple affair. From a few basic facts of human nature, we can derive a large number of inferences in a short time. We have demonstrated in the pre-

3. Boulding : *Economic Analysis* p. 11
4. *Ibid*. p. 14.

ceding pages how the law of diminishing utility can be made to yield a number of subsidiary theorems in a short time without undergoing the arduous task of collecting, arranging, classifying and interpreting statistical data. The method of induction is a complicated, time-consuming and expensive method of law-making. *Secondly*, as we shall point out presently, there is at best only a limited scope for experimentation in economics, compared with other sciences, on account of a variety of reasons. If the method of experimentation is not available to us to the same extent as to the physicist and the chemist, then the second best alternative is to fall back upon the method of deductive reasoning which obviates the necessity of experimentation. *Thirdly*, the deductive method results in accuracy and exactness in generalisation, the reason being that this method invariably makes use of logic and mathematics and with logic and mathematics as its allies there can be few chances of mistakes or inaccuracies creeping in the deduced inferences. Hence this method leads to a very high standard of precision in abstract economic reasoning. The deductive method has produced some outstanding achievements not only in Economics but in other physical sciences as well. One of the most important discoveries in the science of physics *viz.* the Einstein theory of relativity is a purely deductive achievement. Einstein's main thesis that light is refracted by gravitation was arrived at by a process of deductive reasoning. This thesis has since then been verified by observation of stars during the Sun's eclipse. Economists

may not have produced a theorem comparable to Einstein's theory of relativity as a result of the use of deduction. But the fact remains that if the premises are sound and reasoning careful, there is no reason why we, as economists, should not attain valuable and truthful results. So there is no reason for us to suffer from deduction-phobia and those of us who are afflicted with this phobia should take the first opportunity to relieve themselves of it in view of the tremendous potentialities of the method of abstraction.

While all this is true and incontestable, it must not be forgotten that the deductive method of reasoning has its dangers and pitfalls too which need careful attention on our part. *Firstly*, it should be remembered that the generalisations arrived at as a result of deductive reasoning can be true only if the assumptions upon which they are based hold good. In other words, the condition of *ceteris paribus* is assumed throughout the process of reasoning. And as we have had the occasion to point out earlier, *ceteris* is never *paribus*. The assumptions upon which the deduced inferences depend generally turn out to be untrue or only partially true. If that is so, the inferences drawn from them automatically cease to be true. *Secondly*, if the economists were to confine themselves exclusively to the method of abstraction, there is every danger of their efforts resulting in the production of "intellectual toys"—theorems having little or no connections with reality and giving birth thereby to what

may be called ' Non-Euclidian Economics'—the counterpart of "Non-Euclidian Mathematics." *Thirdly*, the deductive method proves particularly dangerous when universal validity is claimed for economic generalisations arrived at as a result of deductive reasoning from incorrect or partially correct assumptions. The most dangerous thing, however, would be to frame governmental policies on the basis of deductive generalisations. Any such attempt is bound to be followed by disastrous consequences. As such, the "deductive arm-chair analysis" as Professor A. P. Lerner calls it, needs to be taken with a grain of salt.

## 2. The Inductive Method

The inductive method (also known as historical, empirical and *a posteriori* method) was, as pointed out above, strongly advocated and also made use of by economists belonging to the Historical School. Induction may be described as the technique of a practical approach to the problems of Economic Science. The idea here is to remove or reduce the gulf between theory and practice. The inductive method generally takes two forms *viz.* (i) experimentation ( ii ) statistical form. The former is concerned with testing the validity of laws or generalisations arrived at as a result of deductive reasoning by resorting to the study of actual facts. The latter, on the other hand, is concerned with

5. Non-Euclidian Economics may here be interpreted to mean a set of economic axioms wihch have no validity in real life.

the framing of laws and generalisations on the basis of a large number of facts collected from the various sectors of the economy. In other words, we proceed here from the particular to the general. In popular parlance, the inductive method is generally associated with the statistical form of induction. No doubt, it is an important form of induction, more important than *experimentation* but it does not mean that the method of experimentation can be overlooked or ignored in any way. We proceed now to discuss these two forms of induction in some details.

*( a ) Experimentation.*

The method of experimentation is indispensable for the physical and the natural sciences. In fact, the physical and the natural sciences could not have developed and attained their present status if this method of experimentation had not been available to them. The physicist and the chemist, by shutting themselves in their laboratories, can conduct all sorts of experiments which may ultimately lead to the formulation of theorems and laws and principles. This method of experimentation which is thus so vital for the physical and the natural sciences, has at best only a limited scope in the science of Economics. There are several reasons why this method cannot be used on the same extensive scale in Economics as in the physical sciences.

*Firstly*, the economist lacks the laboratory facilities which the physicist and the chemist possess in ample measure.

*Secondly*, the physicist and the chemist can experiment on matter because matter forms the subject-matter of their investigations. And matter hardly offers any resistance against being experimented upon by the scientists. As against this, man forms the subject-matter of the study of the economists. Can the economists conduct experiments on human beings ? As is well-known, human beings strongly dislike the idea of being subjected to experimentation. Any attempt to experiment upon them produces a strong resistance unlike in the case of matter. As Professor Albert L. Meyers puts it, human beings have wills of their own and resent being treated as guinea pigs for the purpose of social experimentation.[6]

*Thirdly*, the economic world itself is very complex and complicated, hardly enabling or making possible any attempt at controlled experimentation. In fact, economic phenomena are so closely intermixed and inter-twined that it is almost impossible to segregate them for the purpose of experimentation. The scientist, working in his laboratory, can isolate the phenomenon with which he deals for the purpose of detailed analysis and experimentation. But can the economist do so ? No. He cannot isolate economic phenomena for experimentation because, as we know, too many things are happening in the economic world at the same time. Economics, in this respect, is no better than

6. Albert L. Meyers : *Elements of Modern Economics*. p. 2.

Astronomy or Geology. An astronomer's or a geologist's power to conduct experimentation is limited in the same manner as that of an economist. As already pointed out, the complexity and variety of the economic system constitutes a serious obstacle in experimentation. Can the economist, for example, experiment with the effect of a public works programme on employment during a depression? It is almost impossible to conduct this experiment because so many things can happen in the meanwhile which the economist could not have anticipated. Ordinarily, a public works programme during a depression helps to add to the volume of employment in the economy. But certain things may happen in the meanwhile which may have the effect of preventing any increase or addition to the volume of employment. Among other things, the attitude of private industrialists and entrepreneurs can make all the difference in the employment situation. If they remain cold and unenthusiastic, no amount of public spending in the form of public works can produce any significant effect on the employment situation. In a like manner, a cheap-money policy which is generally considered an antidote to depression, may fail to stimulate private business if there is a general loss of confidence among businessmen and industrialists. No amount of reduction in the interest-rate would have then any effect in promoting new business enterprises or expanding the existing ones.

This, however, does not imply that there is no

scope for experimentation whatsoever in Economics. As already pointed out, there is at best only a modest role for experimentation in economic investigations. For example, experimentation can be made use of by the economist for testing the validity of an economic law like the law of diminishing returns. Experiments can also be conducted in the factories and the mills with new forms of industrial organisation and their effects watched on the efficiency of labour and other related phenomena. Robert Owen, it is said, experimented with the communistic system in his own establishments. In this sense, there is always room for experimentation in Economics. A monopolist firm, an electricity undertaking or a transport company can also resort to experimentation regarding the effects of their rates on the demand for their products or services. But the possible field for experimentation is not unlimited.

Fourthly, as pointed out by Professor Lorie Tarshis, the economist is subject to the pressures of various interest groups. "The physicist and the psychologists are not subject to any such pressures. Since the economist's investigations touch the pocket book, always a sensitive spot, he is exposed to all kinds of pressures. Some would like him to prove that free trade is the best; others that protection is the best; employers would press him to prove that high wages cause unemployment while trade unions would like him to prove that employment is bound to increase if wages are raised.

Thus he is under pressure from all sides to defend their causes.'"[7]

### (a) *Statistical Approach*

The statistical approach, however, has a much larger field in economic investigations than the method of experimentation. It was this form of induction which was mostly advocated by the German economists of the Historical School. Though the inductive method is generally associated with the German economists, there were some economists in Britain too, like Cliff Leslie and others who supported the method of statistical induction. Among the present-day economists, Colin Clark is an outstanding advocate of the method of statistical induction. He remarks, "It would be laughable, were it not tragic, to watch the stream of books and articles attempting to solve exceptionally complex problems of present-day economics by theoretical arguments often without even a single reference to the observed facts of the situation .......Theory has a valuable, indeed an essential, part to play in the development of the economic science. But it must be a theory which respects facts, not tries to supersede them."[8]

The adoption of statistical induction presupposes a somewhat detailed knowledge of the science of statistics on the part of the economist. The economist must be conversant with techniques

7. L. Tarshis : *Elements of Economics*, p. 4
8. Colin Clark : *The Conditions of Economic Progress*, pp. vii-viii.

regarding the collection, arrangement, classification and interpretation of economic data. Failing that, the method of statistical induction would be of little avail to the economist. An adequate training, therefore, in statistical methods is of supreme importance. Statistical induction has acquired added importance in recent years in view of the latest advances in the science of statistics and the availability of abundant statistical data on almost every aspect of national life, particularly in the western countries. Modern governments give high priority now-a-days to the collection and publication of adequate and reliable statistics on the various aspects of national life. As a matter of fact, some governments maintain exclusive statistical departments for the collection and dissemination of statistical information. Even the United Nations' Organisation and its specialised agencies are regularly collecting and publishing international statistics bearing on various economic phenomena. So to-day we have almost a wealth of statistical data on economic matters-almost a paradise for the inductive economist who has now almost unparalleled opportunities of investigations and research into realms and fields hitherto inaccessible. Furthermore, the method of statistical induction is also indispensable for the formulation of economic policy. The days of *laissez-faire* are gone and every government whether in a capitalist or a socialist country has to adopt a well-defined economic policy for the successful and smooth functioning of its economy. In this task, it receives a very valuable assistance

from statistical induction. The total amount of food that a country is to import can be easily estimated or "induced" from the statistics of food consumption and food production within the country. And for a planned economy the method of statistical induction is invaluable for the fixation of production and other targets.

So whether it is "experimental" induction or "statistical" induction, it possesses clear and substantial advantages in economic investigations and research. It is evident that economic generalisations or laws which are arrived at by a process of induction from a set of carefully collected facts generally lead to precise, measurable conclusions. They are no longer the "intellectual toys"—merely the product of intellectual gymnastics, howsoever efficient that process might be. Such generalisations or laws are based on a very sure and realistic foundation and as such their validity is not open to challenge or contest. An economic theorist might tell us that interest will be low or rent high if capital is abundant and land scarce, as a result of deductive reasoning but he cannot tell us how low the interest or how high the rent would be unless he is in possession of all the relevant facts. This, however, is not possible by a process of deductive reasoning. For precision and accuracy, therefore, we shall have to fall back upon induction. Again, some of the important theorems whether in the social or physical sciences, have been discovered as a result of the use of induction. Darwin expounded his great law

of evolution after years' work of assembling facts from diverse fields and subjecting them to a process of statistical induction. Even in Economics some very important theorems and laws have been discovered from an empirical study of facts. The well-known Malthusian theory of population was arrived at only after Malthus had studied the statistical relationship between population and food supply not only in Britain but also in several other European countries. An appeal to economic history also reinforced the Malthusian generalisation. Engel's law of consumption is instance of another important economic law built up directly on the basis of statistical induction. Engel propounded the law only after he had studied several family budgets in Austria. And we know today how true and universal is Engel's law of consumption, although formulated through a method of induction rather than deduction. Even Pareto's law relating to inequalities of income is the product of induction rather than deduction.

While all this is true and undeniable, it must not be forgotten that the inductive method suffers from certain weaknesses too. *Firstly*, there is the serious risk of hurried conclusions being drawn from an inadequate number of facts, particularly when the investigator lacks a balanced and discriminating judgment. *Secondly*, the collection of facts itself is no easy job. As we remarked earlier, the economic world is highly complex and complicated and the facts bearing on it would necessarily be

complex and inter-mingled. It would require a high degree of competence and understanding to segregate the economic from the non-economic, besides a thorough grounding in the theoretical apparatus of Economics itself. *Thirdly*, induction taken alone would not do the trick unless it is supplemented by a process of deductive reasoning. As Professor Durbin remarks, "Facts do not speak for themselves It is only by analysis, comparison, hypothesis and prophecy that they can be made to speak at all." Without the help of deductive reasoning, the empirical method would run the risk of being reduced to a purely descriptive affair. Divorced from deduction the inductive method would result only in producing a mass of unrelated and unconnected facts.

There is consensus of opinion, therefore, that the two methods be blended together for the purpose of economic analysis and investigation. Neither induction alone nor deduction alone can do the trick. The two methods should be considered partners rather than rivals to each other. Instead of being competitive, they supplement each other. As Prof. Samualson remarks, "Properly understood, therefore, theory and observation, education and induction cannot be in conflict."[9] The late Dr. Marshall also spoke in the same strain when he remarked, "It is to be hoped that these two schools will always exist; each doing its own work thoroughly, and

9. P. A. Samualson : *Economics—An Introductory Analysis*, p. 8.

each making use of the work of the other. Thus best may we obtain sound generalisations as to the past and trustworthy guidance from it for the future.[10] A cognate question is: What should be the proportion of the blend; in what proportions are the two methods to be combined together in Economics? It is exceedingly difficult to answer a question like this. It all depends upon the nature of the inquiry and the material available to the investigator. But, in certain respects, the respective fields of induction and deduction can be clearly demarcated for the benefit and guidance of the individual investigator. As Professor F. C. Mills says, "The methods of deduction may be expected to be most fruitful in fields characterised by slight variation, in which there is a close approach to the conditions of sameness and invariant relationships which are essential to the validity of the mechanical view.........In fields marked by wider variation, where the generalisations must admit of many exceptions, the fruitfulness of deductive reasoning is more limited and the direct study of facts, assembled and classified must play a dominant part in scientific investigations. Induction increases in importance as the causes in operation increase in number, as variation becomes more pronounced and as the relations between phenomena depart farther from the simple cause and effect connection which is assumed in the application of mechanical methods"[11]

10. Marshall: *Principles*, p. 30.

11. R. G. Tugwell: *The Trend of Economics*, p. 67. (See Prof. F. C. Mill's article).

## *CHAPTER VII*

## METHODOLOGY OF ECONOMICS (Contd.) (ii) STATICS *VS* DYNAMICS

"I call Economic Statics those parts of economic theory where we do not trouble about dating; Economic Dynamics those parts where every quantity must be dated. For example, in Economics, we think of an entrepreneur employing such and such quantities of factors and producing by their aid such and such quantities of products, but we do not ask when the factors are employed and when the products come to be ready. In economic dynamics, we do ask such questions; and we pay special attention to the way changes in these dates affect the relations between factors and prices."

(J. R. Hicks: *Value and Capital*, p. 115)

*Importance of distinction.* While discussing the methodology of Economics, we cannot fail to consider the important distinction between statics and dynamics which has, as it is pointed out, come to occupy "a fairly well-established place in economic terminology." The use of these terms has recently become more and more frequent. Though the distinction pertains to methodology, some economists have come to consider economic theory as being easily divisible into two main branches *viz.* those of statics and dynamics. We shall discuss the relative contents of these branches at a later occasion in this chapter, but here it needs to be pointed out that the observance of this distinction in economic analysis is of vital importance for the

progress and development of Economic Science itself. As Professor R. F. Harrod remarks, "The correct charting of a line of demarcation between them should have beneficial results on the progress of Economics, and that the absence of recognition of such a line, even, of an understanding of the necessity for it, has led to much confusion and fallacy in recent work.[1] The distinction is important even for the proper understanding of modern economic theory.

*Genesis.* Keeping in view the great importance of the distinction, it would not be inappropriate to trace out its genesis *i. e.* how the distinction came to be observed by economists in the past. The conscious use of the distinction between statics and dynamics seems to have begun in the middle of the nineteenth century. Before that, the writings of the economists were mostly of a static character with few exceptions. For example, Adam Smith considered the economic system strictly within an unchanging framework of private property. David Ricardo was even more static than Adam Smith. The laws that he expounded were conceived as in-

1. While Professor Harrod emphasizes the importance of the observance of the distinction, Professor Knight does not seem to relish the distinction at all. He calls it the "crude distinction often drawn between 'static' and 'dynamic' economics and further remarks, "Needless confusion has been caused by the unfortunate use of the terms "static" and "dynamic" These are highly objectionable because they have in mechanics, a definite meaning unrelated to the main issue in Economics." (See R G. Tugwell's *Trend of Economics*, p. 262)

dependent of the time element—independent even of human institutions. Sismondi was perhaps the only exception to this 'static' view of economic phenomena, but the significance of his work was realised only at a much later date. The discovery, therefore, of the 'dynamic' method in the context of the then total 'static' character of economic theory was an event of considerable significance. The credit for conceiving the idea of evolution in human society goes to August Comte (1798-1857), a theoretical physicist, who, it is said, also introduced the concepts of "Statics" and "Dynamics" into social sciences. But so far as Economics is concerned, these terms were first employed by J. S. Mill, who it is presumed, must have borrowed them from Comte. There is a general misunderstanding which seems to persist even to-day that these terms were borrowed by Comte from Mechanics[2] because in those days it was fashionable to make use of mechanical analogies in social thinking. Further, as Professor Schumpeter says, the average man has already learnt them in Physics and so he thinks that they have been borrowed from Physics. Some economists, too, most particularly Irving Fisher, the American economist, have added to confusion by making somewhat extensive use of mechanical analogies to drive home their point to the untutored mind. The truth, however, is that August Comte never borrowed these terms from

2. Even Professor Stigler holds that these concepts were borrowed from Mechanics (See his *Theory of Price*, p. 26).

Physics. As he himself says, he adopted this terminology from the Zoologist, H. de Blainville. Hence the ultimate lender of this terminology was not Mechanics, but Zoology.[3] In the twentieth century, the distinction between statics and dynamics has been carried forward and popularised by economists like Ragnar Frisch ("On the Notion of Equilibrium and Dis-equilibrium"), J. Tinbergen ("Econometric Business Cycle Research"), Samualson ("Foundations of Economic Analysis"), Haberler ("Prosperity and Depression"), F. Zuethen ("Economic Theory and Method"). As between the two methods, as pointed out above, the static method has historically preceded the dynamic method. The reason is obvious. The static method is much easier and simpler to work out than the dynamic method. Why ? In the static method, we concentrate our attention on those things which seem most important, by assuming that all other things, except the ones in which we are interested, remain constant. To use the Marshallian language, "the economist segregates those disturbing causes, whose wanderings happen to be inconvenient for the time being in a pound called *ceteris paribus*." In the dynamic method, on the other hand, there is no question of *ceteris paribus*. All the relevant factors bearing on the problem are to be considered simultaneously without any time-gap. It is thus evident how complex and complicated the dynamic method can become in actual practice. We proceed now to discuss the two methods in details.

3. Schumpeter : *History of Economic Analysis*, p. 965.

## 1. ECONOMIC STATICS.

As already pointed out, economic theory is generally divided into two parts, namely, (i) Economic Statics, and (ii) Economic Dynamics. The former is concerned with economic phenomena independently of the time element. The latter, however, deals with phenomena which themselves vary with the element of time. The former analysis excludes the time element; the latter analysis gives due consideration to the time element. That, indeed, is the main difference between statics and dynamics. To quote Professor Schumpeter :

"By static analysis we mean a method of dealing with economic phenomena that tries to establish relations between elements of the economic system-prices and quantities of commodities all of which have the same time subscript, that is to say refer to the same point of time. The ordinary theory of demand and supply in the market of an individual commodity as taught in every text book will illustrate this case : it relates demand, supply and price as they are supposed to be at any moment of observation; nothing else is taken into consideration."

In static analysis, therefore, as pointed out above, we ignore the time element altogether. In the example quoted by Professor Schumpeter, time is supposed to be non-existent. We presume the price of the commodity to be determined at a particular time by the forces of supply and demand existing at that very particular time. That is, the three quantities must refer to the same point of

time. In case there is even a slight discrepancy in the timings of the quantities, the relationship shall cease to be a static one. For example, if the price of the commodity at the time X is determined by the forces of demand and supply at the time (X-1) then it is clearly a case of non-static relationship. The reason is obvious. While the price refers to the time X, the demand and supply refer to X-1. The three quantities, therefore, refer to different points of time. The condition essential for the existence of the static relationship is, therefore, missing.

To quote Professor Schumpeter again :—

"But the elements of the economic system that interact at a given point of time are evidently the result of preceding configurations; and the way itself in which they interact is not less evidently influenced by what people expect future configurations to be. Thus, to keep to our example, we may conceive of the situation in our market as determined or at least influenced, by previous decisions of producers which cannot be understood from the conditions of the point of time chosen for observation but only from the conditions that prevailed at the time when those decisions were taken. Hence we are led to take into account past and (expected) future values of our variables, lags, sequences, rates of change, cumulative magnitudes, expectations and so on. The method that aims at doing this constitutes economic dynamics."

Now, taking the same above example, we may point out that the supply of the commodity at the

time X is not influenced by the price prevailing at the time (X−1) only, but also the price that would prevail at the time (X+1). Producers are guided in their production schedules not only by the current prices, but also by the future or the expected prices. In a like manner, the demand for a particular commodity at a particular time is not the result only of the purchasing power in the hands of the consumers at that time, but may also be influenced by the accumulated stocks of money in the hands of the consumers. So to secure a realistic explanation of price-determination, we may have to refer not only to the present, but also to the past and may be, to the future. And when we refer to different points of time while discussing the relationship of the various elements of the economic system, we say then good-bye to statics and enter the domain of dynamics.

Why do we ignore the time-element in static analysis ? Why do we choose a single point of time? The reason is that if different points of time were to be taken into account, the analysis would become complex and complicated. Just to keep our analysis simple, we stick or adhere to a single point of time. This simplifying procedure applies not only to the time-element, but also to various other elements of the economic system. The actual, real world, as we know, is very complex and to deal with it, as it is, would be rather a difficult task unless some simplifying device is adopted to break it up into bits for the purpose of analysis.

As Engels remarked, "The formulation in thought of an exact picture of the world system in which we live is impossible. Mankind, therefore, finds itself faced with a contradiction; on the one hand, it has to gain an exhaustive knowledge of the world system in all its inter-relations; and on the other hand, because of the nature both of men and of the world system, this task can never be completely fulfilled. Each mental image is and remains in actual fact limited."[4]

Though the image of the actual world is at best limited as pointed out by Engels, it does not imply that efforts should not be made to enlarge this image and to make it as accurate as is humanly possible. It is to achieve this objective that the method of statics has been devised not only in Economics but also in other sciences, whether social or physical. Regarding the technique of statics, the late Dr. Marshall said :

"The forces to be dealt with are, however, so numerous, that it is best to take a few at a time; and to work out a number of partial solutions as auxiliaries to our main study. Thus we begin by isolating the primary relations of supply, demand and price in regard to a particular commodity. We reduce to inaction all other forces by the phrase "other things being equal". We do not suppose that they are inert, but for the time we ignore their activity. This scientific device is a great deal older

4. Engels : *Anti-duhring*, pp. 46-47.

than science: *it* is the method by which, consciously or unconsciously, sensible men dealt from time immemorial with every difficult problem of ordinary life..............In the second stage, more forces are released from the hypothetical slumber that had been imposed on them......Gradually the area of the dynamical problem becomes larger; the area covered by provisional statical assumptions becomes smaller.[5] No one could have explained the technique of the statical method in a better or a more exquisite manner than Dr. Marshall. As already pointed out, the statical technique is adopted in sciences other than Economics too. For example, in the physical sciences, the method of statics is a very common and helpful instrument of research and investigation. Every physical scientist makes use of this device while conducting experimentation because the physical world too, like the economic world, is built up of many interacting forces. It is difficult to deal with them all at one time. Scientific analysis, therefore, requires that they should be broken in parts so that each part could be properly understood. The physicist, for example. who wants to study the problem of gravity can do so in his laboratory under highly artificial conditions by keeping the other interacting forces strictly under control. He can allow an object to fall in a vacuum in order to study the influence of gravity upon it quite undisturbed by other factors. He makes use of the vacuum tube because he wants the object concerned to be isolated from the other

5. Marshall : *Principles*—Preface, xiv-xv.

interacting forces. In actual practice, an object does not fall in a vacuum tube. It falls in the open atmosphere and as such it is open to all sorts of influences and resistances. It is possible that instead of falling down it may go up if there is a strong current supporting it from below. A physicist who takes into account all the influences and resistances while studying the problem of gravity may not be able to establish any positive conclusions. He must, therefore, isolate the subject of his study from the extraneous influences. In a like manner, the economist must also isolate the subject of his study from the other externa or the extraneous influences. He must make use of the statical technique if he is going to establish any positive conclusion. True, he has no vacuum tube like that of the physicist; but he has ready at hand the conception of the "static or stationary state" which we shall explain presently. It should, however, be added that the method of statics is to be used in a careful and discriminating manner. It is a method which is easily open to abuse, uninten ional though it may be. For example, if an investigator makes certain assumptions at the beginning of his analysis, he must give due attention to them when he is finalising his conclusions.

is possible that his coclusions may have to be modified in the light of those assumptions. There is every possibility of the investigator forgetting the assumptions with which he started and arriving at conclusions which could only be accepted after considerable qualification.

As already pointed out, statics has been the traditional method of approach of the economic theorist. It is variously known as the method of "decreasing abstraction," "successive approximation" or "the isolating one-at-a time procedure." In recent years, this method has been advocated under the appellation of the "Optimistic" approach. "An optimist" says Joan Robinson, "appears to be an analytical economist who is prepared to work stage by stage towards the still far-distant ideals of constructing an analysis which will be capable of solving the problems by the real world."[6] The optimist procedure consists of gradually advancing from the more simplified to the more realistic postulates. "According to this method, deductions are first made from very simple postulates descriptive of model communities quite unlike our own. Then the postulates are gradually made less simple and more descriptive of the economic conditions of a contemporary community."[7]

*Stationary State.* As pointed out above, the method of economic statics is generally associated with the concept of a stationary state, though there are exceptions too. In view of this, the concept of stationary state acquires considerable importance and deserves to be studied in somewhat greater details. This concept has played an important part in modern economic thought. It should be made

6. Joan Robinson : *Economics of Imperfect Competition*, p. 327.

7. Hutchinson : *The Significance and Basic Postulates of Economic Theory*, p. 73.

clear at the very outset that the concept of stationary state is only a methodological fiction; essentially a simplifying device or a tool of analysis. It has no value for it own sake. It only facilitates an approach to real conditions. As Professor Walter Eucken states, "Obviously, it (the static state) has never been realised historically. Large changes in data have been constantly occurring, occasionally only small changes, but never no changes at all"[8] The concept is, therefore, devoid of any reality, though Professor Boulding thinks that the backward economies of India and China have been showing symptoms of stationariness in the past.

As already said, the concept of stationary state has played a notable part in economic analysis. As a methodological fiction, it was used to the full by Karl Marx. The late Dr. Marshall also referred to the famous fiction of the stationary state and made quite an extensive use of it in his writings. Professor A. C. Pigou has produced a full-fledged work on the *Economics of Stationary States* (1935). We have today not a universally accepted conception of the stationary state. Different economists have defined the concept in their own fashion. We may reproduce some of the definitions as follows :

**Professor Schumpeter defines it as follows :**

"By a stationary state, as the term implies, we

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8. Walter Eucken : *The Foundations of Economics* (1950), p. 204.

mean not a method or mental attitude of the analyst, but a certain state of the object of analysis, namely, an economic process that goes on at even rates or more precisely, an economic process that merely reproduces itself."[9]

It is explicit from the definition that Schumpeter's conception of stationary state does not wholly rule out changes taking place in the economic system. The point that he emphasizes is that the changes are taking place at even or uniform rates so that the economic process is merely reproducing itself. The national output, for example, remains stable without any shift either in the upward or the downward direction.

**Professor Macfie defines it as follows :**

"The stationary state is an economic system in which the factors which control production and consumption, distribution and exchange are constant, or assumed to be constant. Population is regarded as neither increasing nor decreasing and its age-composition does not alter. Methods of production and the total output remain the same, or at least, if population grows, total output must be regarded as growing at the same rate. In this way, it is possible to insulate the system from the disturbances caused by the passage of time and development, and to establish the forces which cause prices to settle in simple undisturbed conditions. It is then possible gradually to add the

9. Schumpeter : *History of Economic Analysis*, p. 964.

more dynamic influences such as changes in technique, demand or population, and to analyse their influence on the stationary situation."[10]

Macfie's conception of a static state, like that of Schumpeter, does not rule out changes altogether. But the changes must be such as to compensate each other. For example, if the population grows, and the food production also grows at the same pace. The two changes, therefore, neutralise each other.

**Dr. Marshall defined it as follows :**

"Nearly all the distinctive features of a stationary state may be exhibited in a place where population and wealth are both growing, provided they are growing at about the same rate and there is no scarcity of land : and provided, also the methods of production and the conditions change very little and above all where the character of man himself is a constant quantity."[11] The definition is self-explanatory.

Professor Pigou describes the general conditions of a stationary state thus :

"In every form of economic stationary state even the least rigorous, the number, the age-distribution, the sex-distribution and the quality of the units that make up the population, the total amount of work that they do, and the total stock of capital equipment (as measured in the amount of work and –

10. Alec L. Macfie : *An Essay on Economy and Value* ( 1936 ).
11. Marshall : *Principles*, p. 368.

waiting that goes to make it ) must all be conceived constant. Of course, stationariness in this sense does not mean frozen fixity; individual drops composing the waterfall are continually in movement, though the waterfall itself remains. Wear and tear takes place, but it is always exactly offset by replacement. Moreover, the rates of wear and tear and replacement are constant; there are no jumps involving variations in the aggregate of work done by industries that make capital goods."[12] Note Professor Pigou's significant words: "Of course, stationariness in this sense does not mean frozen fixity; individual drops composing the waterfall are continually in movement, though the waterfall itself remains." In other words, economic system as a whole may remain static, though its individual constituents may undergo changes now and then. Regarding the use of stationary state as a methodological fiction, Professor Pigou approvingly quotes Bacon who wrote : "In all negotiations of difficulty, a man may not look to sow and reap at once, but must prepare business and so ripen it by degrees." This is only a literary way of presenting the essentials of the statical method.

Professor Pigou further distinguishes three degrees of stationary states."[13] These general conditions are, however, satisfied by three different

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12. A. C. Pigou: *The Economics of Stationary States*, ( 1935 ), p. 8.

13. *Ibid.*, pp. 9-10.

arrangements, all of which may claim in a sense to be stationary states. First, the system of industry as a whole may be stationary, while the several industries that compose it are in movement. Secondly, every separate industry must be stationary, while the individual firms in it are in movement. Thirdly, individual firms as well as industries may be stationary."

"In the least rigorous form, where only the system of industry in the aggregate is stationary, tastes may change in a compensating manner, now one thing becoming fashionable, now another; and technique may change, improvements in the method of manufacturing one thing being balanced from time to time against disimprovements in the method of making another.......Replacements of men and machines need not be equal to displacements in particular occupations, though they must be equal to them on the whole."

"In the second form of stationary state....not merely the system of all industries, but each several industry, looked at as a whole, is stationary. This type of stationariness will be familiar to all readers of Marshall's *Principles*. Just as in an unchanging group of persons, individual men and women are born,come to maturity, grow old and die, so also in any industry that is stationary in this sense do the individual businesses that make it up. It is the unchanging forest; they are the tree that individually pass away."

"There remains the third form of stationary

state. In it not merely the system of industry and every individual industry stand constant, but also every individual business unit. This form contains all the attributes of the other two with a further attribute added. I shall speak of it as the thorough going stationary state......It will be found that a study of this simple and highly artificial model enables us to disentangle a number of complex inter-relations that are fundamental in the real world."

The three degrees of stationary states which Professor Pigou distinguishes go a long way in clarifying our ideas about the conception of the stationary state. The first two forms of stationary states which Professor Pigou propounds have certain common features with the definition as given by Marshall. Pigou, like Marshall, permits certain movements in the stationary state, although the economic system as a whole remains constant, In the third form, however, no movement is permissible and all changes are completely ruled out. This form is, as Professor Pigou says, the thorough-going stationary state.

Professor Harrod does not seem to agree with the conception of a thorough-going stationary state. He says: "we do not mean by it (static economy) one in which no one does anything at all. That is indeed perhaps the unkind suggestion of those who have affirmed that the truths of static economics will only apply when we are all dead. No; in a static equilibrium certain values are

deemed to remain stationary in the absence of fresh disturbing causes. These values are the quantities of the various factors of production applying themselves to output, the quantities of the various kinds of output forthcoming per annum and the prices of the factors and of the various kinds of output. Thus a *static* equilibrium by no means implies *a state of idleness, but one in which* work is steadily going forward day by day and year by year but without increase or diminution."[14]

The thorough-going state is thus highly unrealistic; only to be realised when we are all dead. That is quite true. But, then, are the other forms of stationary states realistic? No. They are equally unrealistic. The truth is that the entire concept of the stationary state is, as already stated, a methodological fiction; a device for facilitating the task of analysis. Professor Stigler's definition of the stationary state is quite comprehensive and specific. He defines the stationary state as follows:

"A stationary economy may be defined as one in which there are no changes in the three fundamental sets of data:

"*Tastes*. The tastes or preferences of individuals for various commodities and services are fixed. Under such conditions, no goods will ever become unstylish.

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14. R. F. Harrod: *Towards a Dynamic Economics* (1949), pp. 3-4

*Resources.* No soil shall be washed away; no new areas settled; no new ores will be discovered nor will existing deposits be depleted. The labouring population will not change in size, age or sex distribution, skill or education. The capital equipment will neither increase nor decrease.

*Technology.* No new inventions will be developed nor will changes be made in the existing production by such developments as scientific management.

It deserves mention that a stationary economy need not be competitive, and indeed a competitive economy has never been (and probably could not be) stationary."[15]

Professor Stigler's conception of the stationary state does not rule out changes altogether, although the possibility of changes taking place in the economy is reduced to a considerable extent when the three economic quantities *viz.*, tastes, resources and technology remain constant. Professor Stigler does not agree with the common assumption that a stationary economy is generally a competitive economy. In fact, this seems to be corroborated from our experience of the Indian economy in the last century, when, according to Boulding, it coincided with a static economy. And then there was hardly any element of competition to be witnessed in any sector of the Indian economy. Almost all the

15. G. J. Stigler : *The Theory of Price* (1948), p. 25

values were governed by custom rather than competition.

While it is true that the concept of the stationary state has played a notable part in economic analysis and aided in the explanation of difficult and complex problems, it must not be forgotten that the concept is highly artificial and unrealistic, "for stationary state can tell us nothing about anything actual at all," As Professor Hicks appropriately puts it, "Stationary state is, in the end, nothing but an evasion."[16] Furthermore, this concept has had the unfortunate effect of making some economic theorist stationary-state—minded and thereby checking the development of economic theory itself. Some of them have got so much accustomed to thinking in terms of stationary state that it has almost become an inseparable part of their mental equipment. Such an attitude naturally stands in the way of the proper and legitimate development of economic theory. As it is pointed out, the theory of interest has badly suffered as a result of the static attitude of the economic theorists. The theory, as it stands, excludes several important aspects.

So far we have been discussing the method of economic statics and its somewhat logical complement *viz.*, the concept of stationary state. Now we shall turn to the methodology of some of the eminent economists in the past and see to what extent did they make use of economic statics in

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16. J. R. Hicks: *Value and Capital*, (Second Edition), p. 117

their analysis and treatment of economic problems. As far as Economics is concerned, we have already pointed out earlier that historically speaking economic statics preceded economic dynamics and being the older economic statics is more highly developed than economic dynamics. Most of the economists in the past have been rather heavily drawing upon statics for the purpose of analysis. As already referred to, the early classical economists used statics to the almost entire exclusion of dynamics in their writings. Adam Smith and David Ricardo conceived of economic laws as almost entirely independent of the time-element. J. S. Mill adopted this method in a highly scientific form. He believed in isolating causes in a complex situation and studied them one at a time because, according to him, what was true in the abstract was also true in the concrete after making the proper allowances. Dr. Marshall's methodology may also be considered as one of statics. His theoretical apparatus is essentially of a static character, though he did make occasional excursions in the field of dynamics. His treatment of the problem of value in terms of periods—too short, short and long periods, is essentially of a dynamic character. Despite these occasional dynamical excursions, his attitude was one of reluctance to abandon his static conceptions and as Professor Schumpeter remarks, Marshall "left the main body of economic theory on the static bank of the river." The most rigorous use of statics, however, as a conscious methodological device, was made by the American eco-

nomist, J. B. Clark. He, for example, remarks, "The world from which change is excluded is unreal but the static laws which can be most clearly discerned by creating such a world have reality and are in fact as efficient in a society which is undergoing transformation as in one that is altogether changeless."[17] After having worked out the static laws of value and distribution, he proceeded to take account, one by one, of increasing population, growth of capital, improvements in technical methods *etc.* J. B. Clark thus attempted to use statics as a useful approach to dynamics. The methodology of the late Lord Keynes was one of statical analysis. Though it is true that Keynes' *General Theory*[18] gave a mighty impulse to what we call "macro-dynamics" and today there is hardly any attempt on macro-dynamics which does not take the dynamised form of Keynes' model as the starting point. The fact, however, remains that the analytic apparatus of the *General Theory* is essentially static. No doubt, Keynes added dynamic flavour to some valuable constituents of his model (note his use of business *expectations* in the determination of the marginal efficiency of capital) yet the truth is that the hard core of his theory was strictly static. His neglect of period and sequence analysis, particularly in relation to his concept of the

17. J. B. Clark: *Essentials of Economic Theory* (1907), Preface, p. vi.

18. An abbreviated name for Keynes' *General Theory of Employment, Interest and Money.*

Multipliar, is an outstanding example of his static analysis.

While economists in the past have rather made an extensive use of the method of statics, it is unfortunate that the present—day economists are now attempting to go back upon it and to narrow down the field of statics by imposing numerous restrictions on its use. The balance is now somewhat tilted in favour of dynamics. While that in itself may not be an undesirable phenomenon yet minimising the importance of statics and restricting its future use is also not a healthy development. As we have learnt, the traditional theory was almost wholly cast in statical terms and if we are going to disown or discard the method of statics, that means that the entire body of traditional theory shall be lost to us. The laborious researches and findings of the older economists shall have been wasted. And it cannot be denied that the older theory does contain much that is valuable and useful for us. If we disown it, we do so at our own expense. What is still more deplorable is that this tendency to let down statics arises as Professor Harrod says, from "a certain tendency to denigrate the work of the older economists." But despite this tendency, Professor Harrod observes, "I am sure that statics will remain an important part of the whole."[19] Why ? Because this is the only way to make the treatment of

19. R. F. Harrod : *Towards a Dynamic Economics* ( 1949 ), p. 5

complex problems clearer, simpler and more precise. In the words of Professor Stigler, "Even where economic phenomena are completely understood, it is not desirable to analyse them in a single step; the explanation of complicated phenomena is usually also complicated, and there are pedagogical advantages in breaking the explanation down into parts."[20]

*Problems In Economic Statics.* We would now turn to a brief consideration of the principal problems of economic statics. It may be added that the problems in economic statics are those problems connected with equilibrium conditions which do not involve any variations in the time element. The main problems of economic statics are as follows:

(i) The problem of family budgets is a problem of economic statics. It is true that the family budgets do change from year to year, but the annual expenditures of families at different levels of incomes vary little with the passage of time. The family budget of an individual may change as his income increases or decreases but the pattern of expenditure for different levels of incomes remains more or less invariant.

(ii) The functional relationship between price and demand *i. e.* the relationship between the quantity demanded and the price of the product is a reasonably permanent structure of the economic

20. G. J. Stigler: *The Theory of Price*, p. 25

variable is the source of most of the fallacies in Political Economy."[21] Here, again, it may be said that the variables are treated as constants only for the purpose of simplifying and facilitating the task of analysis. As the work of analysis proceeds, these variables, which have hitherto been considered as constants can be gradually introduced into the analysis one by one to watch their repercussions on the main body of conclusions. Nevertheless the charge of unreality continues to persist against the method of statics. And as Professor Hicks has observed, "Although some notable economists have been content to mould their thought in such a frame as this, it ( statics ) leaves out far too much of the real problem to be a secure resting place."[22] Furthermore, the term "economic statics" is itself not very appropriate. It may even be misleading, because in statics itself we are frequently engaged in examining the effects of particular changes *e g.* changes in demand or in cost of production *etc.* The stationary state itself, as we have seen, may be in perpetual movement, although the changes taking place may neutralise each other.

## 2. COMPARATIVE STATICS

So far we have proceeded on the assumption that the method of statics is concerned only with the static or the stationary state or a stationary process alone is studied by Statics. This assumption

21. Quoted by O. Morgenstern in his *Limits of Economics,* Chapter III, main heading.

22. J. R. Hicks : *Value and Capital,* p. 6.

is not in any way unrealistic. Statics is generally concerned with the stationary or the non-evolutionary process. But it is quite possible for the method of statics to explain even an evolutionary or a dynamic process by a series of static models. So when the method of statics is called upon to study a changing process, it is often referred to as the method of comparative statics[23] It must be borne in mind that studying the evolutionary process as a whole and at one time is the task of dynamics. In comparative statics, we, however, study the evolutionary process in a series of equilibria and often compare the new position of equilibrium with that of the old. It is of great interest to compare the different equilibrium positions corresponding to different sets of data. In order to fully grasp the effect of a change in the set of data on the corresponding position of equilibrium, we must allow the change in a single datum at a particular time. It is only thus that we can fully understand the effects of changes in individual data. For example, we start with set X of the data and the equilibrium position corresponding to it, and then study next the equilibrium position corresponding to set Y of the data where set Y differs from set X only in the change of a single datum at a time. Thus we compare the two equilibrium positions and the equilibrium values for the system

23. According to Professor Schumpeter. the term "Comparative Statics" was first used by F. Oppenheimer in his book *Wert Und Kapitalprofit*. (See Schumpeter's *Economic Analysis*, p. 965).

system, changing little with the passage of time. As such, it may be considered a static relationship.

(iii) The theory of pure exchange between the buyers and the sellers in a market depends upon the curves of supply and demand and consequently is a theory belonging to economic statics.

(iv) The law of diminishing marginal utility, as we generally study it, does not include the element of time. The consumption of the commodity concerned is supposed to take place at the same time without any time-interval. Since the time element is explicitly excluded, it may be considered to be a problem belonging to economic statics.

(v) The law of monopoly value may also be regarded as part of statics since the theory is built up on the assumption that the behaviour pattern of the buyers and sellers remains invariant with the passage of time.

(vi) The distribution of national income in an economy *i. e.* the number of people in each income bracket is more or less a permanent feature and changes little with the variations in time.

(vii) The whole doctrine of comparative costs which Professor Harrod considers "a very key section of static economics" is based on a timeless consideration of the factors causing international trade.

(viii) The theory of rent too has been

established without any consideration of time and as such a legitimate part of economic statics.

(ix) Lastly, the marginal analysis itself belongs to statics, because it lends itself rather poorly to dynamics.

It would thus appear that the main body of economic theory is static in nature. Now, before we shift on to the next topic, we would do well to make a passing reference to the shortcomings of statics as a methodological device for economic analysis. The main weakness of the method of statics is its somewhat unreal characteristic "escape from stern reality into a romantic world". It is often complained that the method of statics proceeds on the basis of such unrealistic assumptions as perfect mobility, perfect knowledge and perfect foresight. Now even a tyro in Economics knows that such assumptions as these are quite untenable in practice and basing our analysis on them will tend to create an air of unreality about it. To this, it can be replied that making of these assumptions perhaps cannot be helped because unless these assumptions are made, the matter to be studied cannot be isolated for the purpose. It does not, however, follow that these assumptions are implicit in the general body of static economics or in the practical recommendations that flow from it. Further, the method of statics is criticised on the ground that it assumes as constant what is variable in practice. And as Professor Edgeworth remarks, "The treating as constant of what is

corresponding to them, with one another. This type of analysis is known as comparative statics as it studies the changes in the equilibrium positions resulting from changes in a single datum.

It should, however, be noted that the method of comparative statics does not deal at all with the transitional period from one position of equilibrium to another. It simply jumps over the transitional developments. It is concerned only with the final position of equilibrium. David Ricardo, it is said, was a great advocate of comparative statics. He was concerned only with the final phenomenon. In a letter to Robert Thomas Malthus Ricardo wrote." You always have in mind the immediate and temporary effects ... ........... .. I fix my whole attention on the permanent state of things which result from them."[24] He was of the view that the new equilibrium position was not affected at all by the transitional developments and as such they could be ignored because they hardly presented any interesting problems to the analyst.

Now to illustrate the method of comparative statics, we shall take the example of the quantity theory of money which might be taken as an excellent example of comparative statics. The Quantity Theory of Money, as we know, examines the effects of changes in the supply of money on the price-level. According to this theory, a change in

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34. See Ricardo's *Notes on Malthus' Principles*, ed. by Professor Hollander, p. xxxviii (1928).

the supply of money shall, *ceteris paribus*, change the price-level proportionately. For example, a doubling in the supply of money shall, *other things remaining the same*, double the price-level. Now here we start from one position of equilibrium and move to another. In other words, we start from a certain relationship between the supply of money and the price-level existing at any particular time. Then we introduce the change in a single datum *viz.* in the supply of money and examine the effects of this change on the position of the equilibrium. As already pointed out above, the change is to be introduced in a single datum only and its repercussions examined on the position of the equilibrium. In this example, therefore, we change only the supply of money and examine its effects on the price-level. Obviously, the price-level now moves to a new position; the equilibrium has shifted and we can now compare the new position of the equilibrium with that of the old. In comparative statics, we are not interested in the "transitional" developments at all. We are interested only in the final phenomena. What happens to the price-level in the "transitional" or "intervening" period is of no interest to us. We can easily skip over it because, as pointed out by Ricardo, the "transitional developments have no effect on the final position of the equilibrium."

To give yet another example. Take the case of a commodity, the production of which is subject to the law of increasing returns or diminishing costs,

Now suppose that the demand of the commodity suddenly goes up. It is again a change in a single datum only. The demand alone is assumed to change. All other things remain as they were. What would be the effect of this rise in demand on the price of the commodity? The effects on the price of the commodity could be discussed under two heads: (i) immediate (ii) long-term. The immediate effect would be to push up the price as a result of a sudden increase in demand, because the supply could not be increased so soon. But if the rise in demand continues to persist, the manufacturers would attempt to increase the supply of the commodity by devoting more labour and capital to its production. As they do so, the law of increasing returns or diminishing costs would come into operation; costs would decline and the producers would be able to sell their products at a lower price. The long-term effect thus on the price would be to lower it. Now, as already pointed out above, in comparative statics, we are not interested in the "intervening" or the "transitional" developments. What happens to the price of the commodity in the immediate period is no concern of ours. We are only interested in the "ultimate" price of the commodity And as we have seen, the ultimate price goes down as a result of a rise in demand. We started with one position of the equilibrium and arrived at another and by comparing the 'old' with the 'new' equilibrium, we find out the difference caused by the introduction of a change in a single datum.

Henry Ludwell Moore, an American economist, was a great exponent of the method of comparative statics. It is said that he made a bold attempt to create, by a number of ingenious devices, a statistically operative comparative statics. His work entitled *Synthetic Economics* (1929) is now considered a landmark in the evolution of comparative statics. Sismondi, however, was an uncompromising opponent of the method of comparative statics. He admitted that a new state or a new equilibrium will emerge when we introduce a change in a single datum. But he urged that "the road to it (the new equilibrium) may be so long and lead through such upheavals—"terrible sufferings"—as to make it practically impossible for the analyst to deal cavalierly with the incidental phenomena." In other words, Sismondi, unlike the exponents of comparative statics, gave so much importance to the "transitional" or the "intervening" phenomena that they could not simply be ignored. An analysis which ignored the "transitional" phenomena was not worth much in the eyes of Sismondi. Sismondi, as we know, was an exponent of economic dynamics in which the lags, sequences and periodicities form important items. In fact, they are the very essence of the economic process and if they are ignored or overlooked as they are in comparative statics, the resulting analysis can by no means be regarded as realistic or even comprehensive. From this point of view, the dynamic analysis is much more comprehensive and informative than comparative statics. Nevertheless, the comparative sta-

tic treatment does provide some very important insights into the mechanism of the exchange economy. As such, comparative statics is not to be dismissed lightly as of no consequence. As a methodology, it must continue to exist side by side with statics and dynamics. And it is to dynamics now that we turn for a detailed treatment.

## 3. ECONOMIC DYNAMICS

Hitherto we have been discussing statics and comparative statics. In statics, as we have seen, we deal with a static state or a stationary process. This technique is exceedingly simple because *ceteris paribus* is assumed except in the variable which is the the subject-matter of investigation. In comparative statics, we deal with an evolutionary phenomenon or process but only by a series of static models and the equilibria so obtained are later compared with the initial equilibrium. The method of dynamics is, however, quite different from statics and comparative statics. Dynamics deals with an evolutionary process in a dynamic manner. There is no assumption of *ceteris paribus* as in statics. And there is no break-up of the evolutionary process into a series of static equilibria as in comparative statics. Dynamics is a method which takes into account all the changes, lags, sequences, cumulative magnitudes and even expectations. From this point of view, dynamics is a very realistic method of study or investigation. It is also a very comprehensive method in so far as it excludes nothing of importance from the purview of study, although

by so doing it certainly becomes a very complex and a complicated method of analysis.

Though the method of dynamics has been developed comparatively recently, yet instances of dynamic analysis in the economic writings of the past are not completely lacking. The use of geometric progression in the Malthusian theory of population is an outstanding example of dynamic analysis in Classical Economics. We could also refer to J. M, Clark's principle of acceleration or Aftalion's theory of business fluctuations as examples of dynamic analysis from the history of economic thought prior to 1925. Again, Dr. Marshall, though rightly classed as a statical economist, introduced several extra-static considerations—mainly about growth and sequences into his writings and in a way he might be considered to have prepared the ground for the future development of economic dynamics. It was, however, after 1925 that economic dynamics achieved notable progress. The pioneers in this direction were Frisch, Roos, Tinbergen, and Kalecki. In fact, these writers have done much to popularise the method of dynamics among the younger economists. In the field of national income analysis, economists like Robertson, Haberler, Harrod, Kapp, Hansen, Machlup have done much to stress the use of dynamic processes. In fact, several mathematical models have been prepared by these writers incorporating dynamic processes in national income analysis. It is to be remembered that the

dynamic method lends itself particularly well to mathematical treatment. Some of the mathematical models are so complicated as to be beyond the understanding of the non-mathematical economists. In Europe, the Swedish economists like Myrdal, Bertil Ohlin, Lindhal and Lundberg have also tackled national income analysis through dynamic models. A good deal of useful work has been done in the field of trade cycle theory on the basis of dynamics in recent years. Thus economic dynamics is gradually becoming popular and already, as referred to earlier, attempts are being made by younger economists to narrow down the field of statics with a view to giving stimulus to dynamic thinking and analysis. During the thirties, attempts were also made by some economists to dynamise aggregative theory and since then *Macro-dynamics* has become almost a distinct branch of economic analysis.

Now let us see why do we resort to dynamics in Economics? What is the necessity of dynamic treatment of economic problems? The answer is that the economy does not adjust itself at once to particular changes in the data. It takes time to adjust itself to changes in data. Suppose the income of the community increases in the period $t$. Now the output that is being produced in the period $t$ shall not be available for consumption in the period $t$. Why? Because the output of the period $t$ shall take sometime to reach the market and be available for consumption only in the next period, say $t+1$.

So the increased income in the period $t$ shall be spent on the output produced during the period $t-1$. It is evident thus that income and output do not correspond to each other automatically and immediately. The output available in the period $t$ is the result of the decisions taken by the entrepreneurs in the period $t-1$, while the income available in the period $t$ has been generated in the period $t$ itself. The time factor thus creates several complexities for economic analysis. To take another example: the supply of a commodity at a particular time is determined not only by the price ruling in the market at the time but also by the price which the manufacturers anticipate in the future. If the anticipated price is not high, the manufacturers would not increase the supply of the commodity, howsoever attractive its ruling price may be. The reason is that the ruling price is not so very important for the manufacturers as the anticipated price. After all, the production of the commodity shall take some time to be completed and the commodity to be brought into the market. Another point to be noted is that the supply of the commodity is affected not only by its ruling or anticipated price, but by a host of other factors as well, Any of these factors might operate adversely to affect the production of the commodity. Howsoever high the anticipated price, the supply perhaps could not be increased because there was an acute shortage of raw materials or of labour supply or of breakdown of machinery. Thus we say that the production of the commodity is subject to seve-

ral uncertain factors and as such is a highly complex phenomenon. In the method of statics, we get rid of these complexities and uncertainties by assuming the *ceteris paribus*. In dynamics, however, *ceteris paribus* is a forbidden fruit. There is no assumption of the "stationary state" permissible in dynamics. Things must be taken as they are or as they work out to be, howsoever unpleasant or inconvenient the process may be. So dynamics is a difficult method of investigation not only because there is no *ceteris paribus* but also because the time element must be taken fully into account. And it is because of the time element that we come across sequences, periodicities and lags in the economic process. The method of statics solves the problem of these lags and periodicities simply by eliminating them. But the method of dynamics cannot afford to eliminate them. It has to face them boldly. In so doing, the the dynamic theory shall naturally become very complex and complicated, requiring a good deal of mathematical treatment. Some present-day economists are sceptical about the success of dynamic theory conceived in the above terms. For example, Stonier and Hague remark, "In any case, the real world is a very complex place, and the creation of a theory of economics which tries to take account of all or even most of that complexity would be beyond the capacity of any human brain. We shall, therefore, confine ourselves to building up an analysis which considers only the most important features of the modern economy and which, whilst inevitably

abstract and a little unreal has the virtue of being simple and therefore easily intelligible."[25] Professor A. P. Lerner also emphasizes the same point when he remarks, "when we leave the stationary economy things become somewhat less neat."[26]

As regards the actual contents of the method of dynamics, we shall do well to examine the definitions as given by some eminent economists :

Professor J. R. Hicks says :[27]

"I call Economic Statics those parts of economic theory where we do not trouble about dating; Economic Dynamics those parts where every quantity must be dated. For example, in economic statics we think of an entrepreneur employing such and such quantities of factors and producing by their aid such and such quantities of products but we do not ask when the factors are employed and when the products come to be ready. In economic dynamics, we do ask such questions ; and we pay special attention to the way changes in these dates affect the relations between factors and prices."

So if we append dates to the various economic variables that we consider, the resulting analysis would be a dynamic analysis. In Professor Hick's example, if the input is dated and the output is also dated, the result would be dynamics,

25. Stonier and Hague : *A Text-book of Economic Theory* (1953), p. 1.
26. A. P. Lerner : *Economics of Control*, p. 253.
27. J. R. Hicks : *Value and Capital*, p. 115

because by dating the input and the output, we have brought in the element of time which, as we have already pointed out, is the hallmark of economic dynamics.

Professor J. A. Schumpeter says [28]

"We call a relation static if it connects economic quantities that refer to the same point of time. Thus, if the quantity of a commodity that is demanded at a point of time (*t*) is considered as dependent upon the price of this commodity at the same point of time (*t*) this is a static relation. We call a relation dynamic if it connects economic quantities that refer to different points of time. Thus if the quantity of a commodity that is offered at a point of time (*t*) is considered as dependent upon the price that prevailed at the point of time $(t-1)$, this is a dynamic relation."

Professor R. F. Harrod says [29] :

"Then Dynamics would be concerned with an economy in which the rates of output are changing. We should have as the correspondent concept of velocity in physics a steady rate of change (of increase or of decrease) in the rate of output per annum ; acceleration (or deceleration) would be a change in this rate of change."

The emphasis in both the definitions is on the time element.

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28. J. A. Schumpeter : *History of Economic Analysis.*
29. R. F. Harrod : *Towards a Dynamic Economics,* p. 4.

Professor G. J. Stigler says[30]:

"Dynamic economics is the study of the path by which a set of economic quantities (*i, e.* prices and quantities) reach equilibrium, within a static framework."

Professor Stigler's emphasis on the word 'path' is significant because thereby the "transitional" or "the intervening" phenomena are automatically included in the scope of dynamics which is, as it should be. In fact, this characteristic of dynamics distinguishes it from comparative statics which overlooks or ignores the "transitional" development.

Professor P. A. Samualson says[31]

"It is the essence of Dynamics that economic variables at different points of time are functionally related, or what is the samething, that there are functional relationships between economic variables and their rates of change, their velocities, accelerations or higher derivatives of derivatives"

The stress is again, as in Schumpeter's definition, on 'economic variables at different points of time." The common thread which links all these definitions is the time-element which, in fact, distinguishes dynamics from statics or comparative statics.

30. G. J. Stigler: *The Theory of Price* (1949), p. 25.

31. See Professor P. A. Samualson's article, *Dynamic Process Analysis* in the *Survey of Contemporary Economics*, ed. H. S. Ellis.

The Cobweb Theorem might be taken to illustrate Economic Dynamics. It is a very appropriate example of dynamic theory. The Cobweb Theorem furnishes us an explanation of certain very curious cyclical movements which are to be found in the prices and outputs of some agricultural commodities. In certain commodities like vegetables, potatoes and hogs, it has been found by experience that a fairly regular cycle operates in relation to them. In a particular year, for example, the supply of potatoes may be low and consequently its price high. The high price of potatoes tempts the producers to sow more potatoes for the next crop. The new potato crop will take some time to mature. As the new crop comes into the market, the supply exceeds demand and the price is depressed. The low price provides a disincentive to the farmers who shall now sow less potatoes than before. As the new crop matures, it is found that the supply falls short of the demand; the price again rises and exercises an expansionary influence on the farmers; supply increases once more and thus the Cycle goes on and on. Now, as already said, the Cobweb Theorem[32] is a very apt example of Economic Dynamics, because in it we study not only the various equilibria established from time to time, but also the path traversed by them before they finally mature.

32. A parallel concept is Professor Tinbergen's Shipbuilding Cycle which relates particularly to the shipbuilding industry. This is comparatively a new branch of Dynamics which is yet in the infant stage.

*Problems in Economic Dynamics.* We would now turn to a brief consideration of the principal problems of Economic Dynamics. It may be added that the problems of Dynamics are those problems connected with equilibrium conditions which essentially involve the element of time.

(i) Closely connected with the Cobweb Theorem is the Theory of Business Cycle, a term which is frequently used in economic analysis to refer to the more or less periodic alternations of business between prosperity and depression. In recent years, a good deal of literature has grown up around the Theory of Business Cycle and some outstanding contributions have been made to the explanation of the phenomena of the business cycle. All this belongs to the domain of Economic Dynamics.

(ii) The theory of the growth of population also belongs to Dynamics. We have already referred to Malthus' geometric progression in the growth of population as an example of dynamics prior to 1925. The growth of population is a part of dynamics because the growth of several other time series directly depends upon it. As the population of a country grows, the country concerned must increase its food production and industrial production correspondingly. Failing that, it shall not be able to maintain its prevailing living standards. It is a problem with which we in India are directly concerned. Our population is growing at a terrific speed and the food production is unfortunately not

keeping pace with it. As such our food consumption standards cannot be maintained unless the food production is stepped up or the internal production supplemented by imports. All this constitutes an exercise in economic dynamics.

(iii) The Equation of Exchange is a subject of great importance in economic dynamics, since it contains four important variables in economic time-series. A discussion of the significance and importance of this Equation of Exchange constitutes an important chapter in Economic Dynamics.

(iv) The theory of interest also legitimately forms part of dynamics because, as we know, the phenomenon of interest necessarily involves the element of time.

(v) The theory of investment is a subject which is an inseparable part of dynamics. As Professor Lerner says, "Investment is no exercise in comparative statics, in which different stationary states are imagined, but is a dynamic process that takes time."[33]

(vi) The theory of profits also belongs to the domain of dynamics, because profits themselves constitute a dynamic phenomenon. As Professor J. B. Clark, the American economist, tells us, the profits arise only because of the dynamic nature of society. In a static society, there is no possibility of profits because as Professor Knight says, "In the

33. A. P. Lerner : *Economics of Control*, p. 333.

static state each factor secures what it produces and since cost and selling prices are always equal there can be no profits beyond wages for the routine work of supervision."[34]

(vii) Marshall's analysis of the problem of value in terms of periods—very short, and long periods—can be made to fit in dynamics, though Marshall's work as a whole is considered static rather than dynamic.

(viii) Marshall's concept of quasi-rent, again, has a dynamic flavour. As we know, quasi-rent arises only in the short-period whence the time is too short to increase supply in relation to the increased demand. So long as the supply remains fixed, quasi-rent continues to exist. As the supply is increased (and it can be increased only in the long-period), quasi-rent disappears. Quasi-rent is thus only a short-term phenomenon.

*Economic Dynamics and Historical Analysis.* Before we close this section, it would be necessary to distinguish economic dynamics from historical analysis. The two are distinct branches of economic analysis. There are, however, some economists, notably, Harrod who do not differentiate between economic dynamics and historical analysis. There are others like Frisch and Hicks who do make the distinction between dynamics and historical analysis. An intermediate position is held by Charles F. Roos. It would, however, be desirable

34. Knight : *Risk, Uncertainty and Profit* (1940), p. 33.

to observe this distinction in the interest of clear and systematic thinking. As Professor Schumpeter says :

"Dynamics means exclusively analysis that links quantities pertaining to different points of theoretic time and not the theory of evolutionary processes that run their courses in historic time. Dynamic analysis is practically co-extensive with sequence analysis and includes period analysis as a special case, but it is not co-extensive with the theory of economic growth or development or 'progress'.

He further says :

"Dynamic analysis has nothing to do with historical analysis ; its time subscripts do not refer to historical time and its sequences are theoretical or it may be said that it uses theoretical and not historical datings.[35]

As Professor Hicks says, in dynamics the various economic quantities must be dated. The only difference, as Schumpeter says, between dynamics and historical analysis is that, whereas in dynamics the datings are theoretic or imaginary ; in historical analysis the atings are historical or real. Furthermore, the historical analysis is concerned with the theory of growth or development, while dynamics has nothing to do with it.

35. J. A. Schumpeter: *History of Economic Analysis*, p. 965

# CHAPTER VIII

## ECONOMIC SYSTEMS (i)

"An unrestrained and unrestricted capitalism exhibits complex and irregular fluctuations in its basic aggregates which are symptomatic of a lack of adequate homeostatic mechanisms. What the system clearly needs is a 'governor' or 'thermostat' of adequate sensitivity."

(Kenneth E. Boulding: *A Reconstruction of Economics*, pp. 303-304)

So far we have been discussing the scope and methodology of Economics. An introductory volume like the present one would not be complete unless a somewhat detailed analysis is made of the economic systems with which the science of Economics deals in actual practice. As we know, the science of Economics deals today with all sorts of hybrid systems—capitalist, socialist, mixed *etc.* Traditionally, however, economic theory has been developed on the basis of a competitive, capitalist economy. Even a major portion of economic theory, as it stands today, has a direct bearing on or application to a capitalist economy only. But it does not imply that economic analysis cannot serve or be of any use to other types of economies. The science of Economics today explains and investigates the problems of all types of economies whether capitalist, socialist, fascist or mixed. It shall be our endeavour in this chapter to deal with the principal economic systems as they are found in the

world today; to study their peculiarities, failings and achievements.

## 1. CAPITALISM

Of the present-day economic systems, Capitalism is perhaps the oldest. Though it has received heavy blows in recent years and has become considerably attenuated in some parts of the world, it still retains its existence in one of the most prosperous and powerful countries of the world, namely, the United States of America besides several other smaller countries. As such, Capitalism deserves our close attention and study.

Professor D. Macwright defines Capitalism as follows: "Capitalism is a system in which, on average, much of the greater portion of economic life and particularly of new investment, is carried on by private (*i. e.* non-government) units under conditions of active and substantially free competition and avowedly, at least, under the incentive of a hope for profit."[1]

An analysis of this definition would reveal three broad features of Capitalism *viz.* private enterprise, 'substantially' free competition and the profit-motive.

Loucks and Hoots define Capitalism thus: "Capitalism is a system of economic organisation featu-

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1. Macwright: "The Prospects of Capitalism" in *A Survey of Contemporary Economics,* ed. H. S. Ellis (1948), p. 452.

red by the private ownership and the use for private profit of man-made and nature-made capital.[2]

The emphasis here is on (i) private property (ii) profit-motive. It is obvious that Capitalism is purely an economic concept. It is not at all concerned with non-economic institutions such as religion, monarchy, polygamy *etc.* although it has been influenced to a great extent by such factors. It should be further remembered that Capitalism, as a system, is of a dynamic character. There is no rigidity or fixity about its contents. As we know, Capitalism has been changing every now and then. It is not the same today as it was yesterday. The Capitalism of Ricardian times was quite different from the present-day Capitalism. Because of its evolving character, it is somewhat difficult to adequately define the concept of Capitalism. The definitions given above are, therefore, provisional in nature. It is more profitable to examine the main features of Capitalism in order to have a proper understanding of it. Following are the principal features of Capitalism.

(*i*) *Private ownership of property.* The private ownership of property is one of the most fundamental institutions of Capitalism. Private ownership of property refers to the right vested in the owner to own and enjoy the property in the manner he likes best. This right of ownership is specifically

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2. Loucks and Hoots: *Comparative Economic Systems*, (1948) p. 37

protected by the laws of the State. The right of ownership includes not only the right to own but also the right to dispose off property in the way considered most advantageous by the owner. Individuals are thus free to own not only consumer goods but also producer goods such as capital equipment, machinery, land *etc.* The institution of private property plays a valuable part in the proper and smooth functioning of Capitalism. Without it-productive activity could not be initiated in a capitalist society. There must be some persons in possession of capital assets to plan and initiate productive activity. Private property also performs the additional function of inducing capital formation in the economy. Its existence gives an impetus to saving. Few people would be willing to save if the right to private property was not recognised by the State. The right to private property also preserves property from deterioration in so far as the owners take all possible precautions to safeguard it against possible dangeis or mishaps. It would thus be seen that the existence of private property is the first pre-requisite for the proper and smooth functioning of Capitalism.

It should, however, be remembered that the individual's right to own property is not considered an absolute right under the present-day Capitalism. It is subject to the overall control of the State. Governments in capitalist countries deem it fit to impose several types of restrictions on the ownership and enjoyment of private property in national

interest. For example, the Government of India have recently taken sweeping powers in their hands to take over under its management an industrial concern which is not being properly run, or in which there is a lot of mismanagement to be found. The Governments may even impose restrictions on the use and enjoyment of ordinary consumers' goods in the possession of private individuals.

*(ii) The Right of Inheritance.* Closely connected with the right of private property is the right of inheritance which is another basic institution of Capitalism. There is a common tendency to confuse the two and to regard the right of inheritance only another phase of the right of private property. And yet the two are separable from each other. It is conceivable to have a system of private property without the right of inheritance as is perhaps found in Soviet Russia A person is permitted to own a house in Russia but he cannot bequeath it to his children. Normally, however, private property and the right of inheritance go hand in hand in capitalist countries. As already said, the right of inheritance is a basic institution of Capitalism It is essential to the very existence of Capitalism. If the right of inheritance were abolished completely, the existence of private property could not support Capitalism for long. For example, if the State were to take over the entire property of the deceased individual, private property would disappear after sometime and the capitalist economy transformed into a socialist

one. The right of inheritance is, therefore, indispensable for the countinued existence of Capitalism. It should be emphasized that the right of inheritance, like the institution of private property, induces capital formation and saving. The motive of saving in not a small number of cases is the desire to bequeath property to one's successors. As is well-known, the right of inheritance is also being interfered with by several governments in capitalist countries in the form of estate duties or inheritance taxes.

(*iii*) *Freedom of Individual Initiative.* Like the institution of private property, freedom of individual initiative is also the principal pillar of capitalism. Freedom of individual initiative can be interpreted here in several senses. As a producer, an individual is free to engage in any business activity that he desires, provided he complies with the laws of the State. He may proceed to work alone or combine in a partnership or a joint-stock company or even a cooperative society. He is even free to give up producing if he considers that to be in his interests. As a consumer, the individual is free to spend his money income in any way he likes best. "Under capitalism," it is often said, "the consumer is the king." It is his preferences which determine what shall be produced by the community. It is true that consumer's sovereignty is not absolute, being subject to all sorts of limitations. Despite these limitations, the fact however remains, that the average consumer is free to determine his

money expenditure in the manner that conduces to his maximum satisfaction. The State does not impose restrictions on his consumption save in exceptional circumstances like war when rationing may have to be adopted to meet shortages of essential commodities. The State may also have to intervene if the consumer indulges in dangerous consumption like opium-taking or drinking or eating of contaminated food. As a worker, the individual is free to choose any occupation he likes or to sell his labour to any employer who pays him the highest wage. He is free to move from a low-wage to a high-wage area if he desires to do so. He is even free to give up working if he has enough reserves to fall back upon. As the owner of a factor of production, say, of capital, the individual can utilise it in the way that brings him the maximum returns. So, on the whole, every individual whether the producer, the consumer, the worker or the owner of a factor of production is free, within certain limits, to further his own interests The limits or the restrictions are imposed by the State in the interests of the community itself. As is well-known, these social restrictions are imposed in the form of factory legislation, pure food laws, fair trade laws *etc.*

*(iv) Competition.* It is another basic feature of capitalism. As a matter of fact, this characteristic of capitalism flows directly from the *(iii) viz.* the freedom of individual initiative. Competition results when every one is free to engage in any business activity one likes. Competition would obviou-

sly not ensue if entry into certain occupations or professions is restricted by statute or convention. Pure competition is no longer considered to be a marked characteristic of capitalism today. Though it may have been true of the early phases of capitalism, in the present-day capitalism pure or complete competition is an exception rather than the rule. Few markets in a capitalist economy are completely competitive in the above sense. Most of the present-day markets are either imperfectly competitive or semi-monopolistic or even fully monopolistic in character. The existence of monopolistic markets cuts at the very roots of a capitalist economy. It is totally inconsistent with the basic institutions of capitalism, because it tends to restrict the exercise, by all, except the monopolist, of the freedom of individual initiative as discussed above. The existence of competition is, therefore, essential for the continued existence of capitalism. It results, for example, in the establishment of free markets where fair or normal prices are charged for consumer and producer goods. Furthermore, competition is an institution that promotes efficiency in the actual working of a capitalist economy. The rival producers have always to be on the alert to avoid wastage and to cut down costs to capture the market. A high-cost producer has no chance of continuing and is sure to be eliminated by the force of competition unless he takes steps to improve his efficiency and cuts down his costs to the level of his rivals. Competition thus acts to save the economy from the curse of inefficient business concerns. Likewise,

competition also acts to keep the labour force in the highest state of efficiency. The fear of dismissal tends to keep a worker alert and efficient in the performance of his duties.

*(v) Profit-motive.* It is often referred to as the "key-institution" or the "heart of all the institutions" of capitalism. In fact, capitalism would be unthinkable without this basic institution of profit-motive. The other features of capitalism, say, private property, to a certain extent, may be allowed even in a socialist economy. As indicated earlier, private property in certain durable consumer goods such as radio sets, refrigerators or even houses is allowed in Soviet Russia. But profit-motive is a feature that pertains exclusively to a capitalist economy alone. It finds little or no place in a socialist economy. As is well-known, every business enterprise in a capitalist economy is governed by the profit-motive. Every entrepreneur, every producer, every businessman is guided in his activities by the profit-motive. Everyone tries to maximise his profits irrespective of what happens to the community as a consequence thereof. Not only that, the entrepreneurs take up only those enterprises which would bring them immediate profits. They have little or no sympathy for those enterprises which, howsoever essential for the well-being of the community, do not yield immediate profits. For a long time, the development of hydro-electricity in India was impeded or checked because private enterprise saw no prospects of immediate

gains in this industry. A socialist economy, on the other hand, pays no consideration to the profit-motive. Productive activity in a socialist economy is governed more by the welfare motive than by the profit-motive. No doubt, profits are calculated but the profit-motive is not the governing motive in a socialist economy. An enterprise considered essential for social welfare may be run and maintained by the State even though it brings losses in its wake. The State may agree to bear the losses if that serves to promote the welfare of the community. But no private entrepreneur is going to bear losses for promoting the welfare of the community unless he happens to be a first-rate philanthropist which, as our experience tells us, is an exception rather than the rule. From this point of view, a socialist economy is positively superior to a capitalist economy in so far as the former affords little place to the profit-motive. Whatever the case, it is obvious that capitalism itself cannot continue to exist without the 'prop' or 'support' of the profit-motive. In fact, it is the profit-motive which affords the spring-board for all economic activity under capitalism. It acts as the proverbial "carrot" which induces the entrepreneurs to take up fresh enterprises. They even go to the extent of undertaking grave business risks for the purpose of earning the maximum of profits. Profit-motive is thus an inseparable feature of capitalism.

In addition to these principal features, there

are certain subsidiary or consequential features as well which deserve a passing reference here for the sake of completeness of treatment.

(*i*) *Economic Inequality.* A capitalist economy is marked by the existence of glaring economic inequalities among the people. The rich get richer and the poor get poorer. The handful few roll in luxuries and wealth while the vast majority are faced with hunger and starvation.

*(ii) Division of Society.* As a consequence of economic inequality, the capitalist economy becomes split up into classes andgroups—the most important division being that of 'masters' and 'men', 'capitalists' and 'labourers' or as often said, the 'haves' and 'have-nots'. Such a grouping of society is not at all congenial to the progress of the community and as we shall point out presently, it directly leads to the emergence of class-war, a development highly detrimental to the progress and well-being of society.

*(iii) Inequality of Opportunities.* A capitalist economy with its glaring inequalities cannot provide for equality of opportunities to all the citizens. The sons of the rich, propertied and influential persons will always enjoy a better start in life compared with the sons of the poor or the 'have-nots.' The latter will always start with a handicap and shall have to content themselves with only 'subordinate' positions, howsoever able and intelligent they may be.

*(iv) Concentration of economic control in the selected few.* Still another feature of a capitalist economy is the concentration of economic control in the hands of a few capitalists *viz.* the company directors. No doubt, there is the vast majority of shareholders having financial interest in the companies, but, as is well-known, the shareholders are mere non-entities, having little or no voice in company administration though theoretically and legally the final powers vest with them,

We have now discussed the various features of capitalism. The reader is warned that the description is by no means exhaustive. Capitalism, as already pointed out, is a highly dynamic system. A changing and evolving system like this is likely to throw up several new features with the passage of time. There is, therefore, no finalty about the present treatment. We have attempted here to give the barest of the existing features of capitalism

## 2. CAPITALISM AND PRICE-MECHANISM

The relationship between capitalism and the price-mechanism (or the market-mechanism) is so close and intimate that it would be impossible for capitalism to continue to exist without the 'prop' of the price-mechanism. A capitalist economy minus the price-mechanism would collapse sooner or later with little possibility of revival or rejuvenation. The price-mechanism is important not only for the capitalist economy, but is also considered essential for the successful functioning of a

socialist economy Professor Tibor Scitovosky goes even further when he says that the price-mechanism is essential for all sorts of economies whether capitalist, socialist, communist or mixed[3]. It is a mechanism which is indispensable for the working of any economy. But, for the working of the capitalist society, the price-mechanism acquires a special significance wich needs a special emphasis here.

The utility of the price-mechanism for capitalism has attracted the attention of the economists and there exists today a sizeable literature[4] on the connection between the two. As already pointed out, the continued existence of capitalism is impossible without the free and unfettered working of the price-mechanism. The price-mechanism in a capitalist economy provides guidance to the producers as to what is to be produced. In seeking new fields for investment, the price mechanism furnishes invaluable guidance to the would-be investors. The higher the prices in a particular industry, the greater shall be the attraction for the would-be investors to enter that industry. As is well-known, the

3. "In fact, the pricing system provides such a simple means of ascertaining the community's wishes and is so powerful an aid to economic organisation that no economy except the most primitive can afford to do without it."

(T. Scitovosky : *Welfare and Competition*, (1952), p. 7)

4. Exposition of the mechanism and functioning of a pricing system is to be found in Gustav Cassel's *The Theory of Social Economy* (1923), Vol. I and E. H. Phelps-Brown's *The Frame-work of the Pricing System*, (1949). See also J. E. Meade's *Planning and the Price-mechanism.*

would-be investors before investing their capital, look at the Stock-Exchange quotations which is another indication of the price-mechanism. The higher the quotations of the stock of a particular industry the higher is the profitability of that industry and greater shall be the willingness of investors to enter that industry. Even after having entered the industry the investors are guided in their production programmes by the price-mechanism. As is obvious, the prices change from time to time and the production schedules can be adjusted to them by the producers. A continued high price for a particular commodity is an indication of its relative scarcity in relation to the demand. Relying upon this indication, the producers can increase the production of the commodity to meet the increased demand. A continued low price is, on the other hand, an indication of the relative abundance of the commodity in relation to its demand. The producers will take steps to reduce the output of the commodity in accordance with its low demand. The output can thus be adjusted to the changes in demand through the working of the price-mechanism, Not only that. The allocation of productive resources like land, raw materials, machines, skilled and unskilled labour and managerial skill between alternative industries is also done through the agency of the price-mechanism. Labour, for example, shall get distributed among the various industries in accordance with the prevalent wages in those industries. The wages, as is obvious, are nothing but a price paid for

the services rendered by labour in production. In a like manner, interest, rent and profits are the prices paid to the capitalists, landlords and entrepreneurs respectively for the services rendered by them. The distribution of capital, land and managerial skill among the competing industries is automatically secured by their respective prices. In the absence of the price-mechanism and the guidance forthcoming therefrom,, it would be difficult, if not impossible, for the productive resources to distribute themselves among the competing uses. The consumers too, like the producers and the owners of the factors of production, secure guidance from the price-mechanism in framing their schemes of expenditure. How is a person's money income to be allocated to different heads of expenditure is again decided by reference to the price-mechanism. Further, a steep rise in the price of a particular commodity is a signal to the consumers of that commodity to economise in its use and to cut down their demand. When all the consumers act in a similar manner, the total demand of the commodity goes down, bringing it into adjustment with the reduced supplies. Likewise, a steep fall in the price of a commodity may induce the consumers to consume relatively larger quantities of that commodity, raising its demand and bringing it into adjustment with the increased supply.

It is thus evident from the above description how important is the role of the price-mechanism in the smooth functioning of a competitive econo-

my. The role, in fact, is so important that some economists have been led to call Economics itself as "the study of the price-mechanism." With its aid, the capitalist economy becomes a sort of automaton—"a *self-acting machine*" which works automatically without any outside assistance or intervention. There is no necessity of appointing a planning commission or an Economic Dictator to work it out as is the case in a socialist economy. All the maladjustments between supply and demand are corrected, not by executive fiats as under socialism but by the automatic working of price-mechanism. No doubt, there exists a "price-mechanism" in a socialist economy as well but that is "price-mechanism" directly 'created' and operated by the Planning Authority. The price-mechanism under capitalism is, however, impersonal or anonymous[5] in that it operates without a deliberate, comprehensive, human control. No one, no buyer or seller, can exercise any significant control over it. There is no question of any mishandling or misuse of the price-mechanism under capitalism. As opposed to this, there is always the possibility of misuse of the pricing system under a socialist economy where it is subject to the vagaries of human control. Even if some mistakes are committed by certain buyers and sellers under capitalism they tend to be offset by the decisions of other buyers and sellers so that the aggregate result is an 'impersonal' result. Furthermore, the pricing-sys-

5. A. Smithies : *Economic Welfare and Policy* (1952), p. 20

tem, under capitalism, by its very nature cannot be dominated either by the producers or by the consumers. There are certain checks and balances inherent in the capitalist price-mechanism which favour domination by neither group. Nor is it necessary to understand the pricing process under capitalism to enable it to function efficiently whereas the pricing process under socialism must be properly understood by the persons who make the major pricing decisions.

While all this is true and deserves credit, it must not be supposed that the price-mechanism under capitalism is singularly free from defects or drawbacks. As already pointed out, the price-mechanism under capitalism reflects the wishes and preferences of the general body of consumers. It is quite possible, rather probable, that some of the wishes and preferences of the consumers may be irrational or even foolish. In such a case, wholesale reliance on the price-mechanism would not be in the interests of the economy. Restrictions may have to be imposed by the State in such cases on the free and unfettered working of the price-mechanism. For example, opium-eating is detrimental on health and economic grounds. The State may have to stop altogether or restrict the consumption of opium in the larger national interests. Obviously, the pricing-mechanism cannot be left free to work itself out under such circumstances. Another weakness of the capitalist pricing system is its general break-down during war-time or in times of acute

shortages. Our recent experience of the Second World War tells us how miserably the price-mechanism failed to bring about an equitable distribution of scarce goods among the various sections of the population. The high prices consequent upon 'short' supplies resulted in the flow of essential goods to the richer classes, inflicting severe hardships upon the poorer classes. We remember how the existence of high food prices in India during the Second World War resulted in starvation deaths among the poorer classes, The Govt. had ultimately to step in and to impose a statutory price-control on food. The price-control was later supplemented by statutory rationing to assure adequate supplies of foodstuffs to the poorer section of the population, Nothing but a general disaster would have overtaken the country if the price-mechanism had been allowed to operate unhindered. This applies not only to India, but also to other countries of the world. It can, therefore, be said that the price-mechanism is purely a normal, peacetime device for the allocation of goods and services. The moment the conditions become abnormal or the war breaks out, the price-mechanism ceases to perform its normal functions and has to yield place to statutory price-control and a system of statutory rationing. Still another drawback of the price-mechanism is its general failure to ensure a satisfactory distribution of the national income among the various sections of the people. It is the free and unhindered working of the price-mechanism which produces vast inequalities in the distribution of

national wealth. As Professor T. Scitovosky remarks, "The principles of equity and social justice are easily forgotten and ignored when people rely exclusively on the automatism of the market."[6] The free and unfettered operation of the price-mechanism would produce injustice, inequity and social discontent which can never be conducive to the progress and development of a country. For backward and under-developed countries, the price-mechanism has special disadvantages. So long as the price-mechanism is allowed to function unhindered, it cannot bring about the rapid economic development of backward countries. Exclusive reliance on the price-mechanism to do the trick will be fatal. We have already referred to the case of India where the industrial development has been impeded or checked because there was far too much dependence on the price-mechanism. It is true that in post-independence India the Government no longer attaches importance to the sanctity or sacredness of price-mechanism and now actively interferes with it to bring about developments in the desired direction. It is because of this changed attitude of the government that the industrial development of the country has been accelerated in the last few years. Nor can the price-mechanism be expected to solve the problem of unemployment which, as we know, is the biggest problem before the industrially backward and undeveloped countries of the world. What to talk of the backward countries, even the

6. T. Scitovosky : *Welfare and Competition* (1952), p. 8.

industrially advanced countries of the world cannot solve the problem of cyclical unemployment by an exclusive reliance on the price-mechanism. The modern theory of employment tells us how the automatic operation of the price-mechanism fails to provide employment to the millions unemployed during the 'depression' phase of the trade cycle.

From the above discussion, we arrive at the irresistable conclusion that, despite its services and automatic working, the price-mechanism, due to certain basic developments in the structure of the competitive economy, has in recent years outlived its utility and ceased to perform satisfactorily its traditional function of allocating goods and factors of production among competing uses. The basic developments in the structure of the competitive economy referred to here are certain new frictions, namely, imperfect competition, monopoly, monopsony, oligopoly and oligopsony *etc.* which have recently made their appearance in the general framework of capitalism. Because of these frictions, the price-mechanism cannot function now freely and smoothly as it had been doing in the past. As such, the price-mechanism can now no longer be regarded as an 'essential' feature of capitalism. As already pointed out, even in capitalist countries the price-mechanism is being increasingly interfered with and even replaced by statutory price-control in the interest of the proper working of the economy, though in socialist countries the automatic price-mechanism has been totally abolished as an

instrument for the allocation of goods and resources among competing uses.

### 3. FOR CAPITALISM

To secure a just and balanced evaluation of an economic system it is essential to set forth its successes and achievements as against its shortcomings and failures. It is intended in this section to acquaint the reader with the principal advantages possessed and the main successes achieved by Capitalism during the last one hundred years or so.

*(i) Automaticity.* An important advantage of the 'traditional' type of capitalism is its automatic or "self acting" nature. It works, unlike a socialist economy, without any manipulation on the part of a central authority. There is no human agency charged with the task of operating it. And yet it works as if there were some 'invisible' hand operating it and steering productive resources into the right channels. This invisible hand is nothing else than the price-mechanism already referred to in the preceding section. It needs no guidance, no advice and no correction from any human agency. Even if there are some maladjustments, they get automatically corrected through the operation of the price-mechanism. Unlike Socialism, the capitalist economy needs no army of personnel to set it going along the right path. Even if it deviates a little, it automatically comes back to the right path after sometime. There are always forces present within

it which are tending to bring the economy back to the original path. While all this is true, this praiseworthy characteristic of *automaticity* is true more of the traditional than of the present-day capitalism.

*(ii) Flexibility.* One of the principal advantages of capitalism has been its flexibility, adaptability and resilience which have enabled it to change itself from time to time in accordance with the changed circumstances. As already indicated, the present-day capitalism is different from the 'traditional' type of capitalism and the difference is to be traced to the numerous changes in the environmental setting. The mere fact that capitalism has faced two world wars shows how elastic and resilient it is in actual practice. A student of recent world history knows how capitalism has moulded and reshaped itself under a plethora of irritating governmental restrictions. It is also known how the concept of private property itself has undergone changes in recent years. Private property is now interpreted to include not only solid material possessions, but also intangible possessions like the goodwill of a business or even contractual rights. It is also well-known how capitalism, with the passage of time, evolved the agency of the "business corporation" to meet the need for large-scale production. Had capitalism been 'rigid' or 'wooden', it would have broken down long ago. It is its flexibility and resilience which keep it going even in the middle of the twentieth century.

*(iii) Risk-taking.* Still another advantage of

capitalism is that under it the entrepreneurs resort to bold experimentation and innovations to earn bigger profits for themselves. In so doing they evolve new production techniques and processes to cut down costs. The lure of profits also leads them to incur grave risks. Risk-taking, on the other hand, is more or less conspicuous under the rival system of socialism where mere routine takes the place of experimentation and innovations.

*(iv) Technological Progress.* Capitalism also accounts for the present technological progress in the world. If an example is wanted, the reader is referred to the amazing technological progress recorded in America during the post-war years. American technique may even be considered in several respects superior to the Russian technique*. It must not be forgotten that there is some connection between capitalism and technological progress. The existence of competition among rival producers leads them to spend more and more money upon the evolving and perfecting of new production techniques which would enable them ultimately to cut down costs in order to beat down the rivals. A firm which sticks to old, discredited and obsolete techniques would soon be ousted from the field to make room for other more enterprising and progressive firms.

*(v) No Wastage of Resources.* The entrepreneurs, in order to maximise their profits, see to it that

*The release of the *Sputniks* by Russia in the last few months has now clearly established the superiority of the Russian technique.

there is no wastage of any kind going on in the productive process. They personally see to it that all wastages either of materials or of labour-power are reduced to the minimum. The rival system of Socialism does not throw up so strong an incentive to avoid wastages as does Capitalism because under the former there is neither the competition nor the profit-motive to check the wastages.

*(vi) Democratic Character.* Capitalism is democratic in character as opposed to Socialism or Communism wich are dictatorial or totalitarian in nature. What is to be produced and how much is to be produced is determined, not by the executive fiats of a Central Authority or of a Planning Commission, but by the wishes and preferences of the general body of consumers which are correctly reflected, as already said, in the price-mechanism. The sovereignty of the consumers gives a democratic flavour to the whole system. Consumer is the king and the producer must dance attendance upon him. Nothing can be forced upon the consumer which he does not like. As against this, the consumer enjoys little or no status under Socialism. He must like and accept what is offered to him. It is this democratic character which appeals most to some votaries of Capitalism.

*(vii) Rising Living Standards.* Capitalism, in some of the Western countries, has led to rising living standards for the mass of the people. One has only to turn to America to realise the type of prosperity conferred by Capitalism. America

today enjoys material prosperity unheard or undreamt of in the past. This can be ascribed mainly, if not wholly, to Capitalism. It cannot be denied that a part of America's present prosperity is due to her rich natural resources which would have made her prosperous irrespective of the economic system adopted by her. But a good part of her present prosperity is definitely due to the basic institutions of Capitalism.

## 4. AGAINST CAPITALISM

As against the advantages and successes, we must set forth the main deficiencies and drawbacks of Capitalism. The principal defects and shortcomings of Capitalism are as follows:

(i) *Lack of Co-ordination.* The main defect of Capitalism is the absence of any machinery to co-ordinate the decisions of millions of businessmen and producers functioning in the economy. In a socialist economy, the problem of lack of co-ordination does not arise because there is a supreme central authority charged with the task and responsibility of co-ordinating the production policies of the various business units. But there is no such co-ordinating agency available under Capitalism. The millions of businessmen take their own decisions without reference to each other. Each businessman makes his own estimate of the probable demand for his products. It is quite possible that serious mistakes may be committed when each businessman makes his own estimate of the probable demand. As a result, very often conditions verging upon confu-

sion may make their appearance in the economy. As Professor Dobb says, "How could order emerge from the conflict of a myriad of independent and autonomous wills?"[7] Professor Lerner likens a capitalist economy "to an automobile without a driver, but in which many passengers keep reaching over to the steering wheel to give it a twist while complicated regulations prescribe the order and degree to which they may turn the wheel so as to prevent them from fighting each other about it."

(*ii*) *Trade Cycle.* The succession of a boom by a slump and of a slump by a boom is the greatest weakness of a capitalist economy. There is now conclusive evidence available to us that the trade cycle is the direct product of the functioning of capitalism. It is now established beyond doubt that certain basic institutions of capitalism *viz.* competition, the profit-motive and the freedom of individual initiative contribute directly to the operation of the trade cycle. The trade cycle, through its operation creates a good deal of economic uncertainty and instability, which can never be conducive to economic progress. In fact, economic instability is the greatest enemy of healthy business enterprise. The 'depression' or 'slump' phase of the trade cycle is particularly detrimental for an economy in so far as it checks or retards all economic progress. Two direct results of the depression are ( i ) unemployed labour and ( ii )

7. Dobb : *Political Economy and Capitalism*, p. 37.
8. A. P. Lerner : *Economics of Control* (1952), p. 4.

idle productive capacity. Both of them contradict each other. The problem of mass unemployment is particularly full of dangerous potentialities in so far as it creates social unrest and the danger of political upheavals. We have bitter memories of the 1930 World Depression when strange phenomena were witnessed: Crops being burnt while the human beings faced hunger and starvation. Such mortifying anamolies could be found under Capitalism alone. A socialist economy, on the other hand, is singularly free from this defect. While the whole capitalist world suffered from the pangs of depression in 1930, Soviet Russia was the only country which remained immune from its debilitating effects. No doubt, attempts have been made in recent years to discover several anti-cyclical devices in capitalist countries, but as Professor Theo Suranyi-Unger says, "The threat of depression is still a sword of Damocles over Western economic freedom.[9]" Professor J. K. Galbraith tells us that "for full five years after the Japanese surrender in 1945, nearly every mature and prudently conducted business in the United States was guided by the assumption that, at some time in the future, the United States would have a serious depression."[10] As already said, the trade cycle is capitalism's greatest failing—one which is very likely to spell its final doom.

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9. Theo Suranyi-Unger: *Comparative Economic Systems*, (1952), p. 16.

10. John Kenneth Galbraith: *American Capitalism*, p. 4.

*(iii) Economic Inequality.* While discussing the features of capitalism, it was pointed out that economic inequality was a marked feature of a capitalist economy. It was also a major defect which corroded and undermined the very foundations of capitalism. Capitalism not only permits but also encourages economic inequalities. As we know, a very wide gulf separates the rich from the poor and as time elapses, the gulf becomes wider still. The rich become richer and the poor become poorer. There are certain important institutions of capitalism *viz.*, private property, the right of inheritance and the operation of the market mechanism. Of these the last one directly creates inequality by bringing relatively rich rewards to the owners of scarce goods or scarce factors. The other two institutions of private property and inheritance further result in perpetuating economic inequalities from generation to generation. Such inequalities ultimately produce very harmful repercussions in the economy. The society gets divided into two hostile blocks *viz.*, the 'haves' and the 'have-nots'. A cold war between the two blocks is a normal feature and at occasions this gets converted into a hot, shooting war to the utter detriment of both the sides. Economic inequality has also the unfortunate effect of concentrating economic and political powers in the hands of a few rich and influential capitalists who utilise it to their own exclusive advantage. Instances are not lacking where the unscrupulous capitalists, through their political influence, have manoeuvred to get

laws passed which directly helped their business. Frequently, they succeed in obtaining 'protection' against imports which compete with the goods they sell, although it may be against the interests of the general body of consumers. The existence of economic inequalities also results in distorting the structural basis of production by diverting valuable resources to the production of luxuries and other non-essential goods for the few idle rich. It can also lead to the perversion of consumption standards on the part of some thoughtless people. Last, but not the least, economic inequality also produces its other counterpart *viz.* the inequality of opportunity. The sons of the rich and the influential secure a better start in life while the sons of the poor and the inconsequential start in life with a handicap howsoever intelligent and able they may be. This creates not only social bitterness and heart-burning but also deprives the society of the services of some of its ablest members.

*(iv) Social Parasitism.* It implies that certain sections in a capitalist economy attempt to live at the expense of others without making any physical efforts of their own. Capitalism not only creates, but also maintains and perpetuates them. For example, there are several persons in a capitalist economy who live on the income derived from the rent of land. Such persons do not put in any labour for their own sustenance but live rather luxuriously on the exorbitant rents extorted from the tenants. Then there are others who live on

the income derived from inherited funds without doing any productive work. The society also suffers because it is deprived of the services which they otherwise would have rendered to it. The very idea of social parasitism is nauseating and the sooner this evil is abolished, the better it would be for the larger interests of society. Even without abolishing capitalism, the evil can be minimised, if not wholly rooted out, by the imposition of heavy taxation on unearned increments, whatever be their sources.

(v) *Economic Insecurity.* Still another failing of capitalism is its inability to provide security of income, tenure and employment to the mass of wage-earners. As we know, the workers in private employment never feel secure in their jobs. They are always at the mercy of their employers who might throw them out of employment at any time it serves their interests. The unscrupulous employers may even resort to wage-cutting by taking advantage of the existence of competition among workmen. Furthermore, capitalism results in making the productive process more and more roundabout and specialised in nature. Specialised workers run a special risk of losing their jobs if there is any fall in the demand of the products of that industry. Socialism in this respect is superior to capitalism because it provides more or less complete economic security to its citizens. Under capitalism too, attempts have been made to provide the much-needed security through

various types of social security schemes but despite this, the problem still remains unsolved. American Capitalism, though it has brought unparalleled prosperity to that country, has not been able to afford a job to every worker desirous of having it. Millions of workers still go unemployed in that land of plenty and prosperity.

*(vi) Wastes of Competition.* Competition which, as already pointed out, is an important basic institution of capitalism, gives birth to all sorts of wastages of valuable resources. The rival producers must spend adequate funds on advertisement and salesmanship to attract the custom of the potential buyers. Lots of money may be wasted merely to oust the rivals from the field. All this money could have been saved if there were no competition among the producers. But, as already stated, competition is something which is almost unavoidable under capitalism. Further, very often the advertisment resorted to is deceptive and misleading so far as the general body of consumers is concerned. The poor consumers are cajoled and coerced into spending money through untruthful advertisment and publicity which otherwise they would not condescend to do. Competition also results in unnecessary duplication of staffs and industrial equipments in the rival firms—a duplication which could easily be avoided under socialism where there is no possibility of competition ever raising its ugly head. There is also the danger of competition leading to the wastage of valuable natural resources like those

of mines, petroleum, land and timber *etc.* just to satisfy entrepreneurs' lust for maximum profits.

(*vii*) *Absence of the Welfare Motive.* It has already been pointed out that profit-motive is the real governing factor so far as business activity under capitalism is concerned. Every entrepreneur attempts to amass the maximum profits without devoting any thought to the welfare of the community. Otherwise how do we explain the conduct of a miller who mixes stones and pebbles in wheat *atta* or the conduct of tea merchant who passes on coloured saw-dust as genuine tea ? Do these people really think of the grave damage that they are doing to human health by their wicked action ? Their conscience is so dead that no such idea of human welfare can ever enter their heads so long as they succeed in making the maximum of profits. Again, it is not only the consumers who are subjected to this shabby treatment, the employees too are not spared from their exploitive actions. The object here also is the same, namely, to make the maximum of profits with the minimum of investment. Low wages, long hours of work under subhuman conditions, no security of tenure *etc.* is the usual story of the working-class people under capitalism. Even if a kind-hearted capitalist agrees to pay heed to human welfare *i. e.* agrees not to exploit the consumers or the employees, he cannot continue to exist for long in a market marked by cut-throat competition. No capitalist can thus afford to be a philanthropist even if he desires to be so.

(*viii*) "*Economic contraception.*"[11] This term means attempts made by industrialists and businessmen to create artificial scarcity of goods with a view to making maximum of profits at the expense of the public. Capitalism offers businessmen powerful incentives to reduce output and restrict supplies of goods with a view to "profiteering." In achieving this objective, the businessmen resort to all sorts of unscrupulous practices such as price-leadership, market-sharing, formation of trusts and cartels, patents, price agreements *etc.* American Capitalism furnishes numerous examples of such restrictive practices being resorted to by the big trusts to amass huge profits for themselves. What is more, all governmental attempts to check and control such anti-social activities have failed to bear fruit. We, in India, too have experience, though not on a large scale, of some industrialists not producing to their full capacity with a view to creating artificial shortage of some essential consumer goods like cloth.

(*ix*) *Capitalism's Social Costs.* The private operation of industries inflicts certain costs upon society which are often referred to as social costs. These costs may be in the form of industrial diseases, cyclical unemployment, industrial accidents, slums, smoky atmosphere *etc.* It is obvious that the private capitalists do not bear these costs, but rather throw their burden upon society as a

11. It was John Strachey who first coined this term in his *Theory and Practice of Socialism* (1936), p. 76.

whole. In any fair evaluation of capitalism, the importance of social costs as a debit item cannot be underemphasized. Due weight shall have to be given to social costs as the price paid by society for the sins of capitalism. The credit for bringing the problem of social costs to the forefront belongs to Professor A.C. Pigou who refers to them as the "bankruptcy of capitalism"[12] and makes a *prima facie* case for extending the range of public ownership and public operation of industries.

(*x*) *Absence of Industrial Peace.* Another defect of capitalism is its general failure to ensure durable industrial peace in the economy. As we know, the employers and the employees organise themselves into associations and unions which are almost always at war with each other. This industrial friction often expresses itself in the form of strikes and lock-outs which are harmful not only to the parties concerned but also to society at large. Despite various attempts to improve industrial relations the problem of industrial peace remains as intractable as ever.

In addition to these major failures of capitalism, there are certain subsidiary defects too which need a passing reference here for the sake of completeness of treatment. As is well-known, capitalism is inseparably associated with colonial exploitation and all that flows from it. Colonial exploitation, as Marx pointed out, is inescapable for a capitalist-

12. A. C. Pigou: *Socialism vs. Capitalism* (1947), p. 43.

country. History bears full testimony to this unpleasant truth. Capitalism has led to imperialist wars having been fought by rival capitalist powers to capture foreign markets for dumping their manufactured goods or for securing cheap supplies of raw materials. Again, capitalism has led to the suppression of smaller firms by large oversized concerns and the emergence of oligopoly or even monopoly to the utter detriment of the consumers and the workers. Even some of the advantages claimed for capitalism are no more than illusions. The claim that capitalism works automatically is no longer conceded, As Professor Blodget remarks, "It is dangerous to conclude that the capitalist system as a whole works freely and automatically, independent of control, by any individuals or small groups of individuals. Actually, the ownership and control of productive wealth and hence of productive decisions, are in the hands of a relatively small number of individuals"[13] Even assuming that the market-mechanism works freely under capitalism, there is an increasing tendency now on the part of certain pressure groups not to accept its impartial judgment.[14] Still another claim that the consumer is sovereign under capitalism is no longer tenable now. The fate of the poor consumer in the context of gigantic trusts and cartels can better be imagined than described. Summing

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13. Ralph H. Blodgett : *Comparative Economic Systems* (1944), p. 567.

14. This applies particularly to America. See George A. Steiner : *Govt's Role in Economic Life* (1953), p. 2.

up, the three main problems of Capitalism are instability, insecurity and monopoly, It is doubtful if the three maladies would respond to any therapeutic treatment administered to them. The only way, therefore, to get rid of the evils of Capitalism is to do away with Capitalism itself.

In recent years, certain new forces have come into operation which are tending gradually to hasten Capitalism's decline. In Great Britain, for example, four such forces[15] have been at work in the last decade or so. They are : (i) Socialisation of key industries since 1945 (ii) the under-mining of the free-market system. As Professor Hutchison says,[16] "The free-market system, the heart of the capitalist economy, has almost ceased functioning. Supply and demand, which once determined the distribution of resources, have yielded to planned prices, planned investment, planned allocation of materials. Where their grand-fathers relied on the impersonal forces of the market to maintain a balanced economy and to promote automatically wealth and welfare, the British people now look to the state, acting as agent for the community, to achieve consciously desired ends. "(iii) Re-distribution of incomes through steeply graduated direct taxation (iv) A comprehensive network of social services. In India, too, these forces may be considered to be at work, gradually transforming the

15. Keith Hutchison : *The Decline and Fall of British Capitalism* (1951), p. 11.

16. *Ibid.*, p. 12.

present capitalistic structure into the "socialist pattern of society." The same trend may also be supposed to be at work in some other capitalist countries of Europe, namely, France and Italy. Socialism can, therefore, be rightly considered as the future system of the world, and it is to this system that we turn now for detailed consideration and analysis.

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## *CHAPTER IX*

## ECONOMIC SYSTEMS (ii)

"Socialism has been called many things, and many things have been called Socialism." (Loucks and Hoot : *Comparative Economic Systems*, p.259).

### 1. SOCIALISM

As already pointed out in the preceding chapter, Socialism is the future economic system of the world. Less than half the world has already gone socialist. Russia and China represent today a powerful socialist combination—a combination which shall, in due course of time, tilt the balance of world power in their favour. As such, Socialism deserves our closest study and attention.

Professor Dickinson defines Socialism as follows: "Socialism is an economic organisation of society in which the material means of production are owned by the whole community and operated by organs, representative of and responsible to, the community according to a general plan, all members of the community being entitled to benefits from the results of such socialised planned production on the basis of equal rights".[1]

Professor Dickinson emphasises the three main characteristics of Socialism in this definition *viz.* ownership of the means of production by the state

1. H. D. Dickinson : *Economics of Socialism* (1949), p. 11

as representative of the community; the idea of the general planning of economic activity; an equitable distribution of national income among the people.

Professor Dobb defines Socialism thus:

"The fundamental character of Socialism consists in its abolition of the class relations which form the basis of capitalist production through the expropriation of the propertied class and the socialization of land and capital."[2]

This definition emphasises the 'classless' character of a socialist society and also the "expropriation of the propertied class" which presumably implies the socialisation of private property without compensation.

Professors Loucks and Hoot define Socialism as follows: "Socialism refers to that movement which aims to vest in society as a whole rather than in individuals, the ownership and management of all nature-made and man-made producers' goods used in large-scale production, to the end that an increased national income may be more equally distributed without materially destroying the individual's economic motivation or his freedom of occupational and consumption choices."[3]

This definition is much more comprehensive,

2. Dobb: *Political Economy and Capitalism*, p. 270

3. Loucks and Hoot: *Comparative Economic Systems*, p. 260.

laying stress on equitable distribution and "freedom of occupational and consumption choices."

It must be clearly understood that Socialism is purely an economic movement, although its acceptance by a country may involve changes in the non-economic aspects of a country's national life. The hard core of Socialism is "economic" in nature. Further, true Socialism should not be confused with mere social reform. There are some social reformers who advocate some limitation on the powers of the capitalists without in any way touching the basic institutions of Capitalism *viz.* the private ownership and management of the means of production. This does not constitute Socialism. Nor does the mere Govt. ownership of a few public utilities lead to Socialism. An essential pre-requisite of Socialism is the complete ownership and management of the means of production by the State. The means of production may be acquired from private owners by the state either with or without the payment of compensation. This consideration, in itself, gives rise to different varieties of socialists. Broadly speaking, there are two types of socialists: (i) Evolutionary Socialists, (ii) Revolutionary Socialists. The former advocate gradual socialisation of the means of production against the payment of compensation to those from whom such means of production are taken over. The evolutionists believe that if there is violence and bloodshed, there would be a good deal of material destruction and Socialism may have to start from a scratch.

The revolutionary socialists, on the other hand, stand for the sudden socialisation of all the means of production without any compensation; they advocate "outright seizure." They also urge violence in order to capture political power, because, according to them, that is the only way to crush the military strength of the propertied classes. Russian socialism is an example of revolutionary socialism, achieved through violence and bloodshed; British socialism is a classic example of evolutionary socialism being achieved through gradual socialisation of 'key' industries against the payment of compensation.

As already stated, evolutionary socialism does not take over all the means of production at one stroke; the process of socialisation, on the other hand, is split up into several stages. The various industries are taken over in a certain chronological order. To start with, the State may take over banking and insurance to equip itself with adequate funds for the task of nationalisation. The Bank of England, for example, was the first to be nationalised by the Labour Government in Great Britain. The second step may be to nationalise public utility services like railways, motor transport, aviation *etc.* These should be followed by the taking over of natural resources industries such as coal, petroleum and other essential minerals. The fourth stage includes the nationalisation of large-scale manufacturing concerns, particularly those where the monopoly element is strongly entrenched.

The last stage is the taking over of small-scale industries and also agriculture, though in these spheres a certain amount of private enterprise may be allowed to co-exist alongwith State enterprise. If socialism is achieved in the manner indicated above there shall be the minimum of dislocation in a country's economic life during the transition from capitalism to socialism.

Though, historically speaking, there are only two types of Socialism *viz.* revolutionary and evolutionary as discussed above, there are certain other varieties as well which have been conceived theoretically in the past. Among the important ones are:

*Guild Socialism*: The guild socialists betray a general distrust of the State. In their view the State can never manage industrial enterprises efficiently and economically. State management, according to them, is sure to lead to over-centralisation and bureaucratic bungling and clumsiness. The State may own the means of production. The guild socialists see no harm in it. But so far as the actual management is concerned, the industrial enterprise should be handed over to the workers' guilds. It is only the workers' guilds which can ensure an efficient and economical management of industrial enterprises. Besides, the handing over of industrial enterprises to the workers would be in conformity with the modern notion of industrial democracy and self-government. The State can, however, assume the responsibility of looking after

the interests of the general body of consumers. Guild Socialism is thus a device put forward to get over the evils of over-centralisation and bureaucratic mis-management.

*Syndicalism*: Like the guild socialists, the syndicalists too begin with a general distrust of the State. State officials betray not only a bourgeosie mentality but also tyrannise over the poor workers. As such, the State should have nothing to do with industrial enterprises. The guild socialists concede at least the right of ownership to the State. The syndicalists deny it even that. Both the ownership and the management of industrial enterprises should be vested in the local syndicates or trade unions of the workers. The national industries are to be placed under the control of national syndicates. Syndicalism had some roots in France, where its advocates or proponents utilised weapons like sporadic strikes, sabotage and general strikes to bring about the collapse of Capitalism.

*Fabian Socialism*: This type of socialism has had some influence in Great Britain. It may be considered only a variant of evolutionary socialism. According to the fabian socialists, socialism is only a matter of conviction. It should, under no circumstances, be forced on unwilling people. The use of violence to bring about Socialism is completely ruled out. The people, on the other hand, are to be convinced, through persuasion and propaganda, about the superiority of socialism as an economic system. Propaganda for socialism is

to be conducted on a literary level through novels and dramas. The late G. B. Shaw was a prominent fabian socialist of Great Britain.

*Communism*: Communism may be considered to be an extreme form of socialism. It is akin more to revolutionary socialism. The communists believe in violence as a weapon to capture political power from the ruling classes. They have no faith in parliamentary democracy as a weapon to capture political power, though a recent transformation seems to have taken place in the ideology of Indian Communists who have captured political power in Kerala (May, 1957) through the ballot box. The communists, unlike the socialists, advocate the socialisation of not only the means of production but also that of consumer goods. For the purpose of socialisation, the consumer goods are divided into two categories:

(i) Those consumer goods whose use is intimately connected with the person of the consumers are exempted from socialisation. Examples: food, clothing, radio sets, motor cars, animals *etc.* In Soviet Russia, the ownership of such goods has been transferred to the individuals. (ii) Those durable consumer goods whose use is not closely connected with the person of the user are retained in social ownership, although their use is allowed to private individuals according to needs. Examples: houses and land *etc*. So far as distribution of national income is concerned, the socialist formula is: "Efforts from each according to his desire for compensation;

goods to each according to his productivity." The communist formula, on the other hand, is: "Efforts from each according to ability; goods to each according to his needs." It may, however, be added that it has not yet been possible to give a practical shape to the communist formula in Soviet Russia. Still another difference is that while socialism may be democratic in nature with little or no centralisation, communism is wholly totalitarian in character with a centralised administrative machinery and concentration of authority.

It must be clearly understood that economic planning is an inseparable feature of socialism. In fact, it is its basic institution, though economic planning is now being increasingly resorted to even in capitalist economies, but real economic planning, it must be remembered, is not compatible with capitalism. As Professor George Soule remarks, "Every step in the direction of planning for social ends must be a step away from capitalism." Real and effective economic planning is possible and practicable only in a socialist economy. "Economic planning" says Dickinson, "is the making of major economic decisions—what and how much is to be produced, and to whom it is to be allocated by the conscious decision of a determinate authority, on the basis of a comprehensive survey of the economic system as a whole."[4] The determinate authority, which Dickinson speaks of, is generally the supreme economic authority known as the Pla-

4. H. D. Dickinson: *Economic Socialism*, p. 41.

nning Commission (in Russia it is known as the *Gosplan*) which is charged with the responsibility of allocating scarce resources into alternative channels. What is to be produced and how much is to be produced—these vital decisions are taken by the Planning Authority which is required to plan every aspect of economic life. A socialist economy thus attempts to secure a co-ordinated development of its resources within the shortest possible time through the agency of planning.

## 2. SOCIALISM AND PRICE-MECHANISM

We have already referred to the price-mechanism in the preceding chapter and pointed out the vital role that it plays in the smooth and successful functioning of Capitalism. In fact, the capitalist structure would collapse without the active support of the price-mechanism. Now this freely operating competitive price-mechanism is conspicuous by its absence in a socialist economy. Not that the price-mechanism does not exist at all under Socialism; what is implied is that the socialist pricing system is not 'free' or 'competitive' like its capitalist counterpart. It is, at best, an arbitrarily-designed pricing system. The prices are not left to be determined by the market forces because there is no 'free' market under Socialism as we find under Capitalism. The prices, on the other hand, are "assigned" prices, determined by the Planning Authority. Not only the prices of goods, but even the prices of factors of production are determined by the Planning Authority, because the

state is the sole monopolist, having under its control and ownership all the means of production. As such, there is no question of the competitive price-determination of the factors of production. In the absence of competitive pricing, it is pointed out by Professor Von Mises, there can be no rational calculation of costs and prices. "Without economic calculation, there can be no economy. Hence in a socialistic state wherein the pursuit of economic calculation is impossible, there can be no means of determining what was rational and hence it is obvious that production would never be directed by economic considerations."[5] Economic activity, in other words, would be without a rational basis—almost a leap in the dark.[6]

The advocates of socialism admit that there is no freely-operating competitive price-mechanism in a socialist economy but their plea is that such a mechanism can be easily created and made to govern economic activity as under capitalism. Once such a mechanism were created, it would not be difficult to have competitive prices for consumer and producer goods. Some economists have outlined plans for the introduction of a competitive price-mechanism under socialism. Among them the prominent ones are H. D. Dickinson[7], Oskar Lange

5. F. A. Hayek : *Collectivist Economic Planning,* Chapter By Mises, p. 105.

6. Professors Hayek and Robbins have also subscribed to this view.

7. See his *Economics of Socialism,* 1939.

and Fred M. Taylor[8], R. L. Hall[9], and A. C. Pigou[10]. Professor Dickinson's plan is well worth examination. He suggests that in each industry a number of semi-autonomous state industrial enterprises be set up on a semi-decentralised basis. Each of these enterprises should be substantially free in engaging the services of factors of production and also in selling its products to the consumers. The State being the sole monopolist of the means of production, shall sell their services to individual enterprises on a competitive basis. In other words, each semi-autonomous enterprise shall have to offer bids to the State for engaging the services of factors of production. At the same time, the individual enterprises shall also sell their products on a competitive basis to the purchasers. The introduction of competition among the business units shall naturally provide them with an incentive to cut down costs with a view to capturing the market. The prices of consumer goods would thus be determined in much the same way as do prices in a competitive economy. It is, however, doubtful if Professor Dickinson's plan would lead to the introduction of a fully competitive price-mechanism. So far as the means of production are concerned, the State is the monopolist-owner, there being no other owner of the productive factors. It would be a case of many buyers buying from a single seller. This is, as is

8. See *"On the Economic Theory of Socialism"*, 1939.

9. See *The Economic System in a Socialist State*, 1937.

10. See *Socialism VS. Capitalism*, 1939.

well-known, no full-fledged competition and the price-mechanism resulting from it could not be considered as strictly a competitive price-mechanism. In recent years, Professor Phelps Brown has also discussed the possibility of providing for the functions of a pricing system under collectivism. He has even outlined a detailed plan for achieving it. His view is that, "there is no technical bar to the working of a book-keeping pricing system for productive factors in collectivism"[11].

The fact of the matter is that all these plans are merely theoretical plans. None of them has actually been tried in practice. It is doubtful if their introduction into socialist economy would really result in the creation of a fully competitive price-mechanism, the main reason being that the State shall be the monopolist-seller of the means of production. So, for our purpose, the price-mechanism under Socialism may be considered to be an arbitrary price-mechanism, devised and worked by the Planning Authority.

The socialist pricing process, though arbitrary and artificially designed, could not be condemned outright. It possesses certain very clear advantages. *Firstly*, the socialist pricing process is not subject to such sweeping and violent fluctuations as the price-mechanism under a competitive economy. Such sudden and drastic price changes under capitalism could not perhaps be avoided altogether. They are essential to equate widely divergent

11. See his *A Course in Applied Economics*, 1953, p. 228.

supplies with demands or demands with supplies. Socialism could easily dispense with such drastic changes in prices. Even if there are maladjustments between supply and demand (and they cannot be ruled out altogether under socialism they can be corrected more easily through gradual changes in prices. *Secondly*, the socialist pricing process gives a certain appearance of non-rigidity or flexibility which the capitalist price-mechanism seriously lacks. The prices under socialism are planned prices; they can be changed or adjusted in accordance with the requirements of the circumstances. If certain 'surpluses' accumulate, they can be cleared off through price-cuts or reductions.

While this is true and correct, it must not be forgotten that the socialist pricing system makes serious inroads upon the consumer's freedom to choose and the worker's freedom of occupational choice. It is not enough to say that Capitalism too assures neither the consumer's nor the worker's freedom of choice. This might perhaps be considered the 'price' which the consumers and the workers have to pay for the 'luxury' of socialism. Further, the socialist pricing process, being artificial and arbitrary in character, might lead to the wasteful allocation of productive factors because it would not be possible to reckon precisely where their employment shall yield the maximum returns. The allocation of resources shall be more or less a rough job. As Professor Phelps-Brown remarks, "The planners will be electricians without volt-

metres. Their economy may show spectacular examples of enterprises; great barrages, the most modern mills, huge aeroplanes and gleaming cars; yet these may go with colossal waste of effort, because resources are being used in ways which are very far from giving the people what they would most like to have, and there is no way of finding out how to do better".[12]

## 3. FOR SOCIALISM

As already pointed out, a just and balanced evaluation of an economic system is not possible unless we set forth its successes and achievements as against its shortcomings and failures. It is proposed in this section to acquaint the reader with the principal advantages possessed and the main successes achieved by Socialism during the last few decades.

(i) *It secures co-ordinated development.* A socialistic economy is, as already pointed out, a planned economy and as such it secures a balanced and co-ordinated development of a country's resources for raising the living standards of the masses. Unlike Capitalism where there are millions of businessmen, each making his own decision independent of others, there is, under Socialism, one supreme Central Planning Authority having complete control over the various aspects of economic life. It has a closer and a more intimate knowledge about the supply and demand positions than a

12. Phelps Brown: *A Course in Applied Economics,* pp. 211-12.

number of isolated individual entrepreneurs. As such, the Planning Authority is in a better position to secure a co-ordinated economic development than millions of independent businessmen under Capitalism can. Furthermore, a socialistic economy secures a quicker and more rapid development than Capitalism. What socialist Russia has achieved under the impact of Socialism during the last forty years or so could not have been secured under Capitalism even in one hundred years.

(ii) *It eliminates the trade cycle* Trade Cycle which, as already pointed out, is the greatest failing of Capitalism very likely to spell its final doom, has been completely eliminated under Socialism. Trade cycle is the direct outcome of Capitalism ; certain basic institutions of Capitalism directly giving birth to it. Under Socialism, however, there is no place for the trade cycle. It stands totally eliminated. While the whole capitalist world suffered heavily from the pangs of depression in 1930, Soviet Russia was the only country in the world which remained immune from its debilitating effects. The trade cycle hangs like the sword of Democles over a capitalist economy while Socialism is singularly free from it. The post-war capitalist world stands even today in perpetual dread of a cyclical depression. The socialist world, however, goes on merrily without being assailed by the gnawing fear of either a slump or a boom.

(iii) *It prevents unemployment.* Socialism prevents mass unemployment by assuring a job to

every citizen. As already stated, the entire economic life in a socialistic economy is planned beforehand so that there is little possibility of maladjustments taking place or economic resources being wasted as very often happens under Capitalism. In fact, Socialism's ability to provide full employment is its greatest asset; an asset which has secured so much popularity for it among the poorer sections of the community. Capitalism, on the other hand, provides full employment only during war-time. In peace-time, a certain amount of unemployment is always associated with Capitalism. Though America today is at the peak of its prosperity, it has not been able to eliminate unemployment altogether. Soviet Russia, on the other hand, has been able to provide a job to every citizen from the very inception of communist rule. Herein lies the clear superiority of Socialism over Capitalism. The world today values bread more than liberty and it is the bread which Socialism has succeeded in providing to the people, although in so doing it has compromised with individual liberty to a certain extent.

( *iv* ) *It secures equitable distribution of national wealth.* Another attractive feature of Socialism is that it secures an equitable distribution of the national wealth in a country. A socialistic society, by its very nature, is a classless society. As such, it does not permit class distinctions of rich and poor, high and low. There are no classes of 'haves'

and 'have-nots' as are found under Capitalism, because Socialism does not allow private property and inheritance. Under Capitalism, the entire control of economic life is vested in few hands while the overwhelming majority of the citizens are mere wage earners. In America, for example, the economic life of the country is controlled, it is said, by 40 to 50 families of big business. In Japan, the number is even less, say 5 or 6. Under Socialism, on the other hand, the control of the economy vests not in private hands, but in the hands of the all-powerful State.

( v ) *It eliminates social parasitism.* Capitalism, as is well-known, breeds social parasitism and exploitation of the weak by the economically strong. The priveleged and the influential sections exploit the non-priveleged and the weaker sections ruthlessly. Capitalism directly gives birth to certain sections such as landlords, rent receivers, intermediaries *etc.* who live directly at the expense of others without putting in any labour for their sustenance. There is absolutely no place for social parasitism under Socialism where everyone has to work to earn his bread. A socialistic economy, therefore, makes full use of the services of all the citizens in various capacities and positions. It permits, under no circumstances, the continuance of idlers and parasites.

( vi ) *It provides social security to the citizens.* Under Socialism, the State is expected to make social security arrangements for all the citizens.

In socialist countries, excellent social security arrangements have been made to cover the daily risks of life; family and children allowances are liberally given. Provisions for medical aid are freely made for the benefit of the citizens. Old-age pensions are given to the old and the infirm. No doubt, capitalist countries like Britain and America have also made social security arrangements for the working-class but these are hardly a match for the comprehensive social security system which exists in Soviet Russia and some other communist countries.

(*vii*) *It eliminates class struggle and social friction.* A capitalist economy is marked by constant class-struggles and industrial friction which do a lot of harm to the smooth working of the economy. Every now and then the strikes break out or lockouts are declared which inflict losses not only on the parties directly concerned *viz.* capital and labour but also on the society as a whole in the form of lower production and higher prices. A socialistic economy, on the other hand, avoids this industrial friction and maintains a continuous and uninterrupted flow of production for the benefit of all concerned.

(*viii*) *It puts an end to colonial exploitation.* Capitalism, as Marx said, leads to imperialism, wars and colonial exploitation. Socialism, from this point of view, is superior to Capitalism. It does not permit colonial exploitation in any form or shape. The surplus capital, instead of being ex-

ported abroad for profits, is retained at home and used to raise up the living standards of the masses.

## 4. AGAINST SOCIALISM.

As against the advantages and successes, we must set forth the main deficiencies and drawbacks of Socialism. The principal defects and shortcomings of Socialism are as follows:

1. *Too much concentration of powers.* A socialist economy is, as is evident, a state-planned economy. The entire economic life of the nation is planned through state-planning agencies. This naturally results in the concentration of too much power in the hands of the State. There is every possibility of the State developing under such circumstances into a dictatorship of the worst type, constituting a serious threat to democratic rights. Liberty may thus be the first casualty in a state-planned economy where all economic decisions shall be taken through executive fiats. All the citizens in such a state shall be mere "wage-earners" with hardly any scope left for individual initiative and enterprise. As Professor Cairncross puts it, "A universal paymaster may be a universal despot."[13] The danger of state dictatorship and despotism is, therefore, not an unreal danger.

2. *Evils of bureaucracy.* A socialist economy, being a state-planned economy, cannot free itself from the evils of bureaucracy. *Firstly*, lots of

13. Cairncross : *Introduction to Economics* (Butterworth & Co., 1944), p. 415.

personnel shall have to be engaged in the task of drawing up the plan, and making it work. A capitalist economy, on the other hand, can easily dispense with such wastages of personnel, because they are not at all required for making the economy work. *Secondly*, the bureaucracy arrogates to itself roles which it is hardly competent to perform with any measure of success. As Trotsky[14] said, "If there existed the universal mind that projected itself into the scientific fancy of Laplace..... ...such a mind, of course, could *a priori* draw up a faultless and an exhaustive plan, beginning with the number of hectares of wheat and down to the last button for a vest. In truth, the bureaucracy often conceives that just such a mind is at its disposal; that is why it so easily frees itself from the control of the market and Soviet democracy." *Thirdly*, bureaucracy is everywhere associated with red-tapism and official delays in the execution of economic plans. It is the realisation of these evils which have recently led the Russian leader, Nikita Khruschev to formulate his plan for the decentralisation and de-bureaucratisation of governmental machinery in Soviet Russia.

*3. No incentive to improvement of labour efficiency.* It is often said that there is no incentive under socialism on the part of the workers to bring about improvements in their performances. The reason given is that under Socialism all the workers are state employees with fixed grades of salary and

14. L. D. Trotsky : *Soviet Economy in Danger*, pp. 29-30.

other working conditions. Promotion to the higher ranks is governed by seniority rather than merit. As such, there shall be hardly any attempt at self-improvement. No doubt, this problem did arise in Russia in the early years of Communist rule. But now this problem has been satisfactorily solved through the use of pecuniary and non-pecuniary incentives for the purpose of promoting labour efficiency. The more efficient and competent workers are given special 'lifts' and increments, special prizes, shorter hours of work, and vacation. To these may be added non-pecuniary awards such as special titles like the "Hero of the Socialist Toil."

4. *Socialism breeds graft and dishonesty.* Another objection against Socialism is that it tends to breed graft and dishonesty among state employees. It is the common experience everywhere that as the Government control of economic life extends, chances of graft and corruption increase in an equal proportion. We, in India, have bitter experience of Government controls in the war and the post-war periods when the grant of licences and permits by the Government officials was attended with corruption and graft on not a small scale. To this the socialist replies: The chief incentive to graft and dishonesty on the part of Government officials will gradually disappear as the right to private property and inheritance is brought under state control. The socialists also point out that there is more graft in big businesses than among Government employees. Such an asse-

rtion may not be totally unwarranted if one were to take into account the business practices (or rather the malpractices) of gigantic business trusts in America.

5. *No sovereignty of the consumers.* "Under Capitalism," it has been said, "the consumer is the king." The producers turn to him for guidance in framing their production schedules. But, under Socialism, the consumer loses his sovereignty. He cannot dictate but, on the other hand, must accept what is offered to him. He would have to consume what the state wishes him to consume. A state-planned economy is very often associated with rationing of essential goods and services so that a consumer has to rest content with his fixed quota. There is little of variety too so that very often there is little to choose. To this the socialist replies: Is the consumer a "sovereign" under Capitalism? It would be a mockery to call a consumer a 'sovereign' when he is penniless and unable to buy anything. Regarding rationing, it is said, it was introduced even in capitalist countries during the war and the post-war periods to tide over shortages of essential goods and services. In socialist countries too, the system of rationing is adopted only when there are acute shortages of certain essential goods. As soon as these shortages disappear, the rationing system is also done away with. The rationing system is, therefore, not a permanent feature of a socialist economy. As regards consumers' preferences, even a socialist

economy dare not turn a deaf ear to them. In Soviet Russia, due regard is paid to the tastes, wishes and preferences of the consumers by the state enterprises in formulating their production schedules. "One method" according to Professor Dobb, "employed by trusts in the clothing and furniture industries in the U. S. S. R. particularly with respect to new designs, is to hold exhibition of models and ask the visiting public to record their vote as to their order of preference between various exhibits."[15]

6. *No freedom of occupational choice.* It is pointed out by the critics that under Socialism there is no freedom available to the workers to choose their occupations according to their desire or aptitude, and that the workers are diverted into different occupations according to the requirements of the state or the exigencies of the situation. Such a criticism may not be entirely without some basis because in a planned economy the manpower resources of the country have to be dovetailed into the general plan of the economy. To this the socialist replies: Even Capitalism does not fully provide for the freedom of occupational choice. Are the workers under Capitalism really free to choose the occupation of their liking? Is not the worker's freedom to choose an occupation limited by such considerations as wealth, status and influence of his parents? A poor cobbler's son, as we know, cannot become a doctor or an engineer, howsoever intelligent and

15. M. Dobb: *Political Economy and Capitalism*, p. 299.

capable he might be, because his parents lack the means to secure him superior type of education so essential for these occupations. In a socialist economy, on the other hand, considerations of wealth and influence have hardly any part to play in the choice of occupations. The workers are, as far as possible, diverted to different occupations according to their abilities and aptitudes.

## 5. MIXED ECONOMY

We have so far considered the two major economic systems *viz.* Capitalism and Socialism. We shall now proceed to discuss the intermediate system very often referred to as *mixed economy*[16], because in several countries of the world it is this economic system which has been accepted by the people and the Government. India affords an outstanding example of a country which has adopted mixed economy as its economic system, though the declared objective of the Government now is to bring about

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16. Professor A. P Lerner does not relish the term *mixed economy*. According to him, "This is a very bad name because it suggests the absence of any single controlling principle but a confusion of different and perhaps contradictory principles. The fundamental point of the controlled economy is that it denies both collectivism and private enterprise as principles for the organisation of the society, but recognises both of them as perfectly legitimate means. Its fundamental principle of organisation is that in any particular instance the means that serve society best should be the one that prevails. Perhaps a better name would be the Service Economy, since it is the question of which method serves best that determines which is to be used." A. P. Lerner : *Economics of Control*, (1952), pp. 4-5.

a "socialistic pattern of society" in due course of time.

An important characteristic of mixed economy is the existence of two sectors *viz.*, the private sector and the public sector. The former comprises of those business units which are owned, managed and controlled by private enterprise. The private sector in India consists of all those industries and enterprises which are in the hands of private capitalists. The public sector, on the other hand, comprises of all those units and enterprises which are owned, managed and controlled by the State. The public sector in India consists of all those enterprises which have been set up by the Central or the State Governments or even by the local authorities The private sector in the mixed economy is generally larger than the public sector, although the latter shows a gradual tendency to expand at the expense of the former. Agriculture, in a mixed economy, is generally considered to be a part of the private sector where the farmer is left free to grow the crops he likes, although the Government may attempt to regulate agricultural production through executive fiats. The government may even go to the extent of fixing minimum prices for the various agricultural products, but the actual task of agricultural production continues to vest in the hands of the peasantry. There is no attempt to collectivise agriculture as is done under Socialism or Communism.

The concept of consumer's sovereignty is

acknowledged as a blueprint, although in actual practice the Government may impose exasperating restrictions on the consumption of certain essential goods and services. Even the rationing of certain goods may be resorted to in case there are acute shortages of them. The reader will remember how the sovereignty of the consumers was undermined by the Government in India through the adoption of statutory rationing of foodstuffs and cloth during the war and the post-war periods. The industrial worker, unlike under Capitalism, is not left to the mercy of the capitalist-employer in a mixed economy. He is well-protected against capitalist exploitation through factory and labour legislation. He is also provided with an increasing measure of social security to cover the daily risks of life.

Though a mixed economy does not root out economic inequality altogether, yet efforts are made by the Government to lessen economic inequalities to the minimum through economic and fiscal measures. Taxation is an important instrument used to reduce the gap between the rich and the poor. The rich are asked to pay heavy and steeply-graded income taxes, death duties or inheritance taxes or even capital levies. The amount so collected may be spent on the poor in the form of free medical aid, free education, cheap housing and other amenities of life.

The allocation of resources under Capitalism, as we have seen, is done through the freely-operat-

ing price-mechanism and that under Socialism, through government direction and control. Since the mixed economy itself is a compromise system, the allocation of resources under it is done partly through the price-mechanism and partly through governmental direction. The Government may even influence the price-mechanism through various fiscal and other measures. The Government may encourage and facilitate the flow of money and credit to those industries which it considers essential for national interests.

It would thus be seen that the mixed economy is an attempt at *economic reconciliation;* an attempt to steer a middle path (*via media*) between the two opposing systems of Capitalism and Socialism. As such, the mixed economy can reap the benefits of both Capitalism and Socialism at the same time.

### 6. FASCISM.

The term 'Fascism' was often used to designate the economic systems of Italy and Germany during the *inter-bellum* period. Primarily, the word 'Fascism' referred to the Italian economic system but was frequently used to cover the '*national*' socialism' or 'Nazism' of Germany too. With the military defeat of Germany and Italy after the Second World War, Fascism has disappeared as an 'active force' from the world scene, though it exists on a small scale in countries like Spain and Argentina. In the study of comparative economic systems, Fascism still retains its importance because it represented altogether a new experiment in the

operation of economic systems. There is the further possibility of Fascism once again raising its ugly head in countries like Italy and Germany. As such, a brief study of Fascism would not be altogether an unprofitable proposition.

Fascism first gained control in Italy in 1922 with the rise to power of Benito Mussolini. Ten years after, Hitler followed suit in Germany. Both Mussolini and Hitler declared that Fascism was the natural successor of democracy and economic liberalism. Both of them looked down upon Socialism and Communism as "hateful and dangerous doctrines." The fascists had absolutely no faith in democracy. Mussolini, for example, urged that the immutable, beneficial and fruitful inequality of mankind.........can never be permanently levelled through the mere operation of a mechanical process such as universal franchise" (Benito Mussolini-*Fascism : Doctrine and Institutions*, p. 21). Nor did the fascists have sympathy or attachment with the doctrine of *laissez-faire* or *competition*. They would, on the other hand, advocate strong intervention of the State in economic affairs in the interests of national power and prosperity. To achieve this objective, the State had necessarily to be strong and powerful. The fascists advocated a totalitarian state a state which was Omnipotent, Omnipresent and Omnicompetent. Mussolini's oft-quoted dictum was : "Everything in the state, nothing against the state, nothing outside the state." As against the state, the individual had no rights except the

ones that the state permitted. The state placed the national interests above everything else.

Like Capitalism, the fascist state permits the existence of private property and the right of inheritance, though these rights, under no circumstances, can be considered as absolute rights. Even the means of production are allowed to be owned privately, but all such private property is to be used strictly in accordance with the directions of the state. Factories and farms may be in private hands, but "what is to be produced and how much is to be produced" is to be decided by the state organs. The owners have merely to carry out the directions issued by the state. They dare not flout state directions or instructions under any circumstances. The consumers may be allowed a semblance of free choice off and on but they too, like the producers, are subject to the strict control of the state. They may, very often, have to buy what the state wishes them to buy. There may even be price-control and rationing of essential goods found in short supply. The fascist state, which as already stated, is a totalitarian state, tolerates no class-conflict in any form or shape. Strikes and lock-outs are legally banned. If either of the parties has any grievance, it must be placed before the state and its decision finally accepted. But, under no circumstances, would the state permit strikes or lock-outs. Fascism laid stress on the creation of a corporate state-a state in which national solidarity would replace group interests. The state enforced

the organisation of the employers and the employees into syndicates which were, in their turn, strictly controlled by the state. Fascism borrowed this idea of syndicates from syndicalism, but left its democratic principles behind.

Fascism has a strong affinity with the old doctrine of mercantilism. The mercantilists, like the fascists also believed in increasing national power and prosperity by all conceivable means. They laid stress on a favourable balance of trade as a means to acquire gold and precious treasure to promote national prosperity. The fascists too, following the mercantilists, emphasized national self-sufficiency with a view to buying as little as possible from outside.

It is rather difficult to evaluate fascism as an economic system *firstly*, because it remained in force for a relatively short time and *secondly*, because there is the lack of adequate statistical information bearing upon the operation of the system. It must, however, be said to the credit of fascism that under it both Italy and Germany were able to attain unparalleled economic expansion during a relatively short period. Italy was able to secure rapid expansion in agricultural production and the generation of hydro-electricity. Industrial production also made rapid headway in Italy under its impact through the maintenance of a prolonged period of industrial peace and amity. Germany was also able to make a bold attack on the problems

created by the Great Depression of 1930. Mass unemployment was soon reduced to manageable proportions through the pursuit of vigorous expansionist policies. Industrial expansion proceeded apace and national income increased even beyond the pre-depression levels.

As against this, it is said that the fascist countries' attempt at national self-sufficiency resulted in the production of high-cost goods at home which naturally raised the living costs for the mass of the workers. It is pointed out that workers' standards of consumption were drastically curtailed under the impact of Fascism, and that the proportion of national income going to the 'haves' or the property-owners recorded an increase during this period. Furthermore, the fascists' attempt to increase national populations through 'marriage subsidies' and 'special tax-exemptions' in Italy and Germany accentuated the economic problems of these countries. Lastly, the fascist system resulted in the evils of bureaucracy and red-tapism, bribery, corruption and favouritism.

We have now considered the various economic systems, their characteristics, merits and demerits. During the *inter-bellum* period, the economic systems of the various countries of the world were divided under three heads (i) Capitalist, (ii) Socialist, (iii) Fascist. After the Second World War, this *tripartition* has been replaced by a *bipartition* and the economic systems are now divided under two

heads *viz.* capitalist and socialist, fascism having disappeared more or less with the military defeat of Germany and Italy in 1945 One thing should, however, be carefully noted. There is now a regular trend towards Socialism and Governmental planning in several countries of the world, although this trend cannot be considered permanent and irreversible as is borne out by the recent example of Great Britain where the coming into power of the Conservative Party has resulted in "*economic reprivatisation*" or what is called *denationalisation.*

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# Exercises

## EXERCISES

Note—*These exercises have been selected from the Question-papers set at the post-graduate examinations of the various Indian Universities during the last few years. The object is to acquaint the student-readers with the type of questions asked on the Nature and Technique of Economic Analysis. The students are recommended to attempt these exercises after having gone through the body of the text.*

1. "The rationale of any definition is usually to be found in the use which is actually made of it."—(Robbins)

   In the light of this remark, give a definition of Economics which, in your view, is most acceptable. State reasons for your choice. (Agra, 1952)

2. Explain critically the definitions of Economics as given by Marshall, Cannan, Pigou and Robbins. (Agra, 1955)

3. Point out in what respects the 'Scarcity' definition of Economics is an advancement over the 'Welfare' definition. (Rajputana, 1953)

4. Indicate and briefly account for the various changes in the definition of Economics. What will be your definition in the light of evolving tendencies. (Lucknow, 1946)

5. "To say, as the Cambridge School does, that Economics is a method rather than a doctrine, that it is not a body of concrete truth but an engine for the discovery of concrete truth, is to express with great felicity the view that economic truth, as such, is unattainable." Discuss. (Mysore, 1949)

6. "Economics is mainly concerned with incentives to action and resistance to action, the quantity of which can be roughly measured in money." In the light of this remark, discuss the nature and scope of economic science. (Madras, 1949)

7. "It makes all the difference between making Economics a

positive or a normative science whether we make wants or needs the starting point of our study." Comment.

(Patna, 1948)

8. "When a man sets out upon any course of inquiry, the objective of search may be either light or fruit."—(Pigou)

Discuss the bearing of the above statement in relation to the study of Economics and indicate the method and objective of Economic Analysis. (Lucknow, M. Com., 1953)

9. Discuss the legitimacy of applying the dictum *"Natura non facit saltum"* to the field of economic theory and economic policy. (Delhi, 1948)

10. "Economics is a science that studies human behaviour as a means to the end of wantlessness." How far do you agree with this statement ? (Allahabad, 1953)

11. "There is no penumbra of approbation around the theory of equilibrium. Equilibrium is just an equilibrium." Discuss the implications of this statement. (Allahabad, 1949)

12. Examine the contention that the definition of Economics as a science of choice between alternatives is essentially static, and give in this connection your views about the importance of economic dynamics. (Panjab, 1953)

13. Keynes wrote in 1922, "The theory of Economics does not furnish a body of settled conclusions immediately applicable to policy." Do you think this statement is still valid ? (Panjab, 1954)

14. Placing yourself in the position of a reviewer for a popular economic journal, attempt a short critical review of Robbins' 'The Nature and Significance of Economic Science' bringing out the leading ideas of the author. (Panjab, 1952)

15. "Economics deals with ascertainable facts ; Ethics with valuations and obligations. The two fields of enquiry are not on the same plane of discourse."—(Robbins)

Examine this statement critically. (Agra, 1953)

16. How is the distinction between theory of Economics and Applied Economics valid ? (Madras, 1948)

17. What are the advantages of mathematical interpretation of Economics ? What are the arguments against the application of Mathematics to the study of Economics and how do you refute them. (Allahabad, 1939)

18. "The laws of Economics are to be compared with the laws of tides, rather than with the simple and exact law of gravitation." (Marshall)

Discuss fully the above statement. (Agra, 1947)

19. Examine fully the relativity of Economic theories. Hence point out the scope of Regional Economics. (Lucknow, 1950)

20. Define the nature of laws in Economics. How have recent methodological discussions introduced greater flexibility into these. (Lucknow, 1948)

21. Distinguish clearly between Micro-economic and Macro-economic methods. Under what conditions would Macro-analysis give better results than Micro-analysis ? (Allahabad, 1953)

22. What is meant by "Aggregative Economics ?" What use has been made of this concept in economic analysis and public policy ? (Lucknow, 1954)

23. How does Macro-economic analysis differ from the traditional economics ? Indicate its significance in the formulation of economic policies. (Lucknow, 1950)

24. What is the difference between Micro-economic and Macro-economic analysis ? Show that neither approach is complete without the other in understanding the economic process. (Lucknow, 1953)

25. Explain the concept of "Economic Equilibrium." Bring out clearly the difference between (*a*) Stable and Unstable Equilibrium (*b*) Partial and General Equilibrium. (Lucknow, 1955)

26. Analyse conditions of Economic Equilibrium in (*a*) static and (*b*) dynamic societies. (Lucknow, 1947)

27. Examine the utility of equilibrium analysis to the study of the problems of development. (Rajputana, 1954)

28. Distinguish clearly between conditions of static and dynamic equilibria. Prove that in fact there is always a tendency towards equilibrium. (Allahabad, 1953)

29. "It is the business of Economics, as almost every other science to collect facts, to arrange and interpret them and to draw inferences from them. Observation and description, definition and classification are the preparatory activities. We desire to reach thereby the knowledge of the inter-dependence of economic phenomena. Induction and Deduction are both needed for scientific thought as the right and left foot are needed for walking."—(Marshall)

    Discuss the above statement fully. (Agra, 1949)

30. What are the limitations of the deductive method in economic analysis ? Suggest alternatives. (Lucknow, 1947)

31. Assess the contributions of the deductive method to the growth and systematization of Economics. (Patna, 1954)

32. Distinguish between Static and Dynamic Economics and examine critically the need for Dynamic Economics. (Agra, 1955)

33. Explain the meaning of the terms "Statics" and "Dynamics" in economic theory. Which types of change constitute Dynamics ? (Lucknow, 1954)

34. Explain and illustrate the technique of successive approximation in economic analysis. (Lucknow, 1955)

35. Examine the scope and importance of Dynamic Economics. (Mysore, 1949)

36. What is Dynamic Economics ? Is it possible to secure equilibrium under dynamic conditions ? (Lucknow, 1953)

37. Explain the term Statics and Dynamics, giving a classification of the stationary states. (Lucknow, 1950)

38. "The function of the price-mechanism is to secure an efficient allocation of (*a*) goods among consumers and (*b*) factors between uses. Explain and discuss. (Lucknow, 1955)

39. Indicate how the price-mechanism brings about optimum economic welfare in a *laissez faire* economy.
(Rajputana, 1953)

40. Examine and compare the functions of price under free economy and under planned economy in the macro-dynamics of the economic system. (Patna, 1954)

41. Do you consider a mixed economy superior to a collectivistically planned economy? Give reasons for your answer.
(Rajputana, 1953)

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